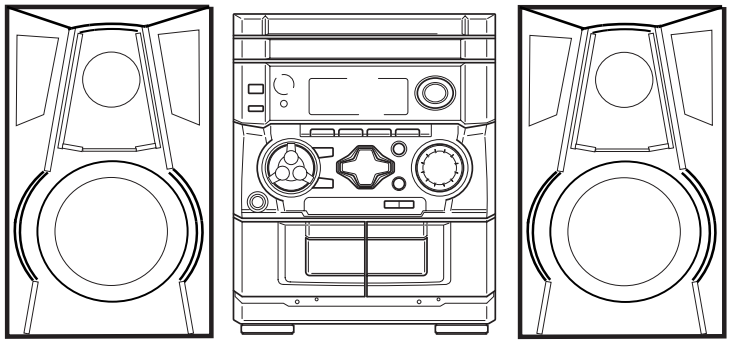
aiwa SERVICE

NSX-AJ200 U
NSX-AJ205 U
NSX-SZ200 EZ,LH
NSX-SZ205 EZ



SERVICE MANUAL

COMPACT DISC STEREO SYSTEM

BASIC CD MECHANISM : BZG-2 ZD4NC
BASIC TAPE MECHANISM: ZZM-3 YPR2NC

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX–AJ200 (TYPE: U)	CX–NAJ200	SX–NAJ202	RC–AAS11(VS)
NSX–AJ205 (TYPE: U)	CX–NAJ205	SX–NAJ205 SX-R145	
NSX–SZ200 (TYPE: EZ)	CX–NSZ200	SX–NSZ202	
NSX–SZ205 (TYPE: EZ)	CX–NSZ205	SX–NSZ205	
NSX–SZ200 (TYPE: LH)	CX–NSZ200	SX–NSZ205	

- This Service Manual is the “Revision Publishing” and replace “Simple Manual” NSX-AJ200/AJ205/SZ200/SZ205<U,EZ,LH>, (S/M Code No. 09-011-440-9T1).
- If requiring information about the CD mechanism, see Service Manual of BZG-2 (S/M Code No. 09-00C-353-2N2).

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S/M Code No. 09-012-440-9R1

REVISION DATA

SPECIFICATIONS

TUNER

FM tuning range: 87.5 MHz to 108 MHz
FM usable Sensitivity(IHF): 13.2 dBf<U,LH>, 16.8 dBf<EZ>
FM antenna terminals: 75 ohms (unbalanced)
AM tuning range<U,LH>: 530 kHz to 1710 kHz (10 kHz step)
531 kHz to 1602 kHz (9 kHz step)
AM usable sensitivity<U,LH>: 350 μV/m
AM antenna<U,LH>: Loop antenna
MW tuning range<EZ>: 531 kHz to 1602 kHz (9 kHz step)
530 kHz to 1710 kHz (10 kHz step)
MW usable sensitivity<EZ>: 350 μV/m
LW tuning range<EZ>: 144 kHz to 290 kHz
LW usable sensitivity: 1400μV/m
MW/LW antenna: Loop antenna

AMPLIFIER

CX-NAJ200
Power output: 20 W + 20 W (50 Hz - 20 kHz, THD less than 1%, 6 ohms)
25 W + 25 W (1 kHz, THD less than 10%, 6 ohms)
Total harmonic distortion: 0.1% (10 W, 1 kHz, 6 ohms, DIN AUDIO)

CX-NAJ205
Power output: 40 W + 40 W (50 Hz - 20 kHz, THD less than 1%, 6 ohms)
50 W + 50 W (1 kHz, THD less than 10%, 6 ohms)
Total harmonic distortion: 0.1% (20 W, 1 kHz, 6 ohms, DIN AUDIO)

CX-NSZ200<EZ> / CX-NSZ205
Power output: 12 W + 12 W (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500)
Reference: 15 W + 15 W (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324)
DIN MUSIC POWER: 39 W + 39 W
Total harmonic distortion: 0.1% (6 W, 1 kHz, 6 ohms, DIN AUDIO)

CX-NSZ200<LH>
Power output: Rated: 40 W + 40 W (6 ohms, T.H.D. 1%, 1 kHz)
Reference: 50 W + 50 W (6 ohms, T.H.D. 10%, 1 kHz)
Total harmonic distortion: 0.1% (20 W, 1 kHz, 6 ohms, DIN AUDIO)

Input: VIDEO/AUX: 500 mV
Output: SPEAKERS: 6 ohms or more
SURROUND SPEAKERS (only for CX-NAJ205): 8 ohms to 16 ohms
PHONES: 32 ohms or more

CASSETTE DECK

Track format: 4 tracks, 2 channels stereo
Frequency response: 50 Hz - 8 kHz
Recording system: AC bias
Heads: DECK 1: playback x 1
DECK 2: recording/playback x 1, erase x 1

CD PLAYER

Laser: Semiconductor laser (λ = 780 nm)
D/A converter: 1 bit dual
Signal-to-noise ratio: 85 dB (1 kHz, 0 dB)
Harmonic distortion: 0.05 % (1 kHz, 0 dB)

FRONT SPEAKERS SX-NAJ202 (only for NSX-AJ200)

Speaker system: 2 way, bass reflex (magnetic shielded)
Speaker units: Woofer: 120 mm ($4^3/_4$ in.) cone
Tweeter: 20 mm ($^{13}/_{16}$ in.) cone
Impedance: 6 ohms
Dimensions (W x H x D): 220 x 324 x 198 mm
($8^3/_4$ x $12^7/_8$ x $7^7/_8$ in.)
Weight: 2.3 kg (5 lbs 1 oz)

FRONT SPEAKERS SX-NAJ205 (only for NSX-AJ205)

Speaker system: 3 way, bass reflex (magnetic shielded)
Speaker units: Woofer: 120 mm ($4^3/_4$ in.) cone
Tweeter: 60 mm ($2^3/_8$ in.) cone
Super tweeter: 20 mm ($^{13}/_{16}$ in.) ceramic
Impedance: 6 ohms
Dimensions (W x H x D): 220 x 324 x 198 mm
($8^3/_4$ x $12^7/_8$ x $7^7/_8$ in.)
Weight: 2.5 kg (5 lbs 8 oz)

FRONT SPEAKERS SX-NSZ202 (only for NSX-SZ200<EZ>)

Speaker system: 2 way, bass reflex (magnetic shielded)
Speaker units: Woofer: 120 mm cone
Tweeter: 20 mm ceramic cone
Impedance: 6 ohms
Dimensions (W x H x D): 220 x 324 x 198 mm
Weight: 2.3 kg (5 lbs 1 oz)

FRONT SPEAKERS SX-NSZ205 (for NSX-SZ200<LH>, NSX-SZ205)

Speaker system: 3 way, bass reflex (magnetic shielded)
Speaker units: Woofer: 120 mm cone
Tweeter: 60 mm cone
Super tweeter: 20 mm ceramic
Impedance: 6 ohms
Dimensions (W x H x D): 220 x 324 x 198 mm
Weight: 2.5 kg (5 lbs 8 oz)

SURROUND SPEAKERS SX-R145 (only for NSX-AJ205)

Speaker system: 1 way, bass reflex
Speaker units: Full range: 80 mm($3^1/_4$ in.) cone
Impedance: 8 ohms
Dimensions (W x H x D): 100 x 132 x 116 mm
(4 x $5^1/_4$ x $4^5/_8$ in.)
Weight: 0.5 kg (1 lbs 2 oz)
Accessories: Wall mounting screws (2)

GENERAL

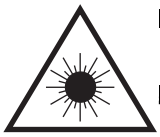
Powerrequirements: 120 V AC, 60 Hz<U>
230 V AC, 50 Hz<EZ>
120 V/220 - 230 V/240 V AC (Switchable), 50 Hz/60Hz<LH>
Power consumption: 60 W<200U>, 67W<205U>, 53 W<EZ>
70 W<200LH>,
Power consumption in standby mode: With ECO mode on: 0.6 W
With ECO mode off: 15 W
Dimensions (W x H x D): 260 x 323 x 291 mm
($10^1/_4$ x $12^3/_4$ x $11^1/_2$ in.)
Weight: 5.9 kg (13 lbs)<U,LH>, 4.9 kg<EZ>

• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

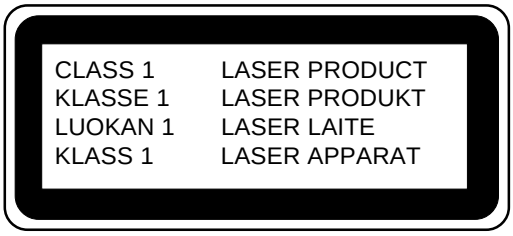
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



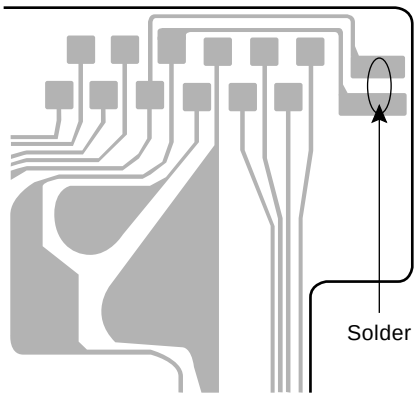
Precaution to replace Optical block

(KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP ASSY PWB



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

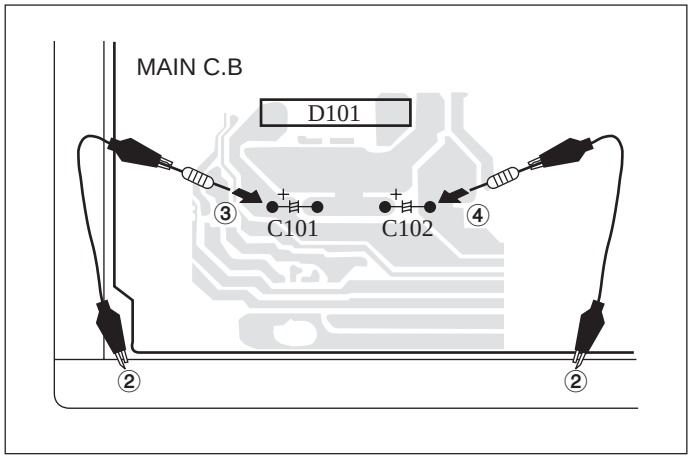


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

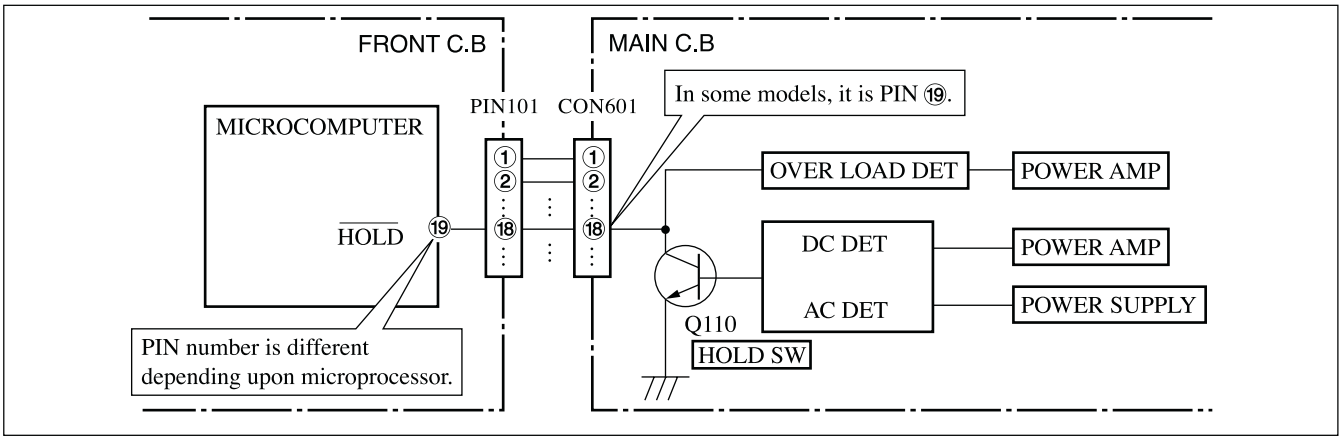


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

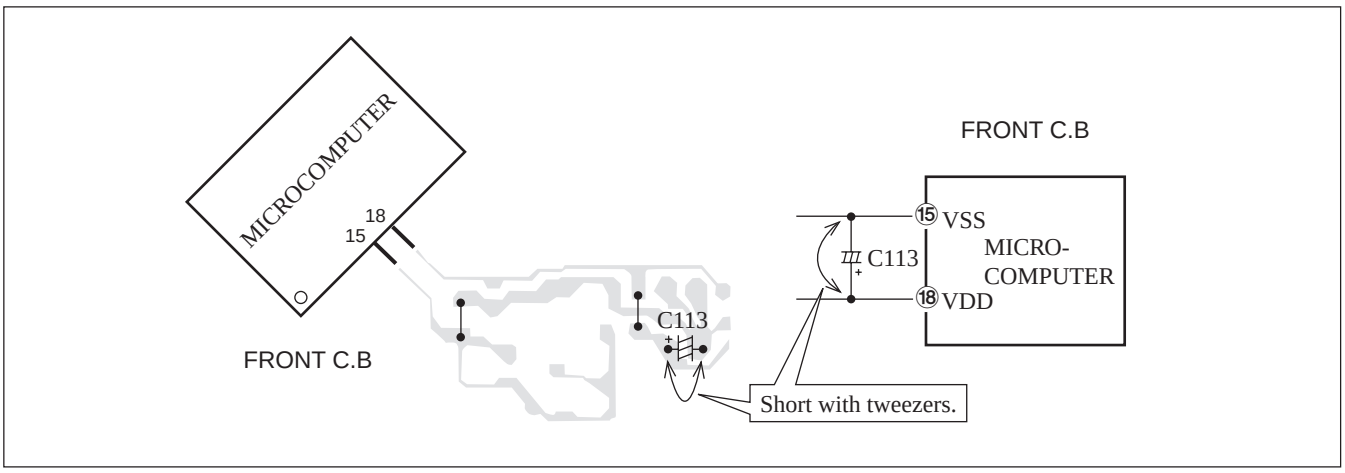


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-269-010		IC,EW732
	87-A21-893-040		C-IC,NJM4558V-TE2
	87-A21-419-040		C-IC,NJM14558MD-TE2
	8B-NFA-602-030		IC,UPD780226GF-022-3BA<EXCEPT 205EZ>
	8B-NFA-603-030		C-IC,UPD780228GF-079-3BA<205EZ>
	87-A21-218-110		IC,NJL64H380A
	87-A21-443-040		C-IC,M62495AFP
	87-A21-695-010		IC,LA1845L
	87-A20-440-040		C-IC,BU1920FS<205EZ>
	87-A21-928-010		IC,LC72131D-N
TRANSISTOR			
	87-A30-494-080		TR,2SA1980G
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
	87-A30-484-080		C-TR,KRA102S
	87-A30-190-080		TR,CC5551
	87-A30-255-010		TR,2SB1342<200EZ,205EZ,200U>
	87-A30-306-010		TR,2SB1677<200LH>
	87-A30-528-010		TR,2SB1686<205U>
	87-A30-256-010		TR,2SD1933<200EZ,205EZ,200U>
	87-A30-307-010		TR,2SD2619<200LH>
	87-A30-529-010		TR,2SD2642<205U>
	87-A30-107-070		C-TR,CMBT5401
	87-A30-106-040		C-TR,CMBT5551
	87-A30-162-010		FET,2SK2937<200LH,205U>
	87-A30-091-080		FET,2SJ460
	87-A30-090-080		FET,2SK2541
	87-A30-062-080		C-TR,KRC104S
	87-A30-492-080		TR,2SC5343G
	87-A30-468-080		C-TR,KRC102S-RTK
	87-A30-582-080		TR,CDA1585BC
	87-A30-495-080		TR,2SA1981Y
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-489-080		C-TR,KRA107S
	89-503-602-080		C-FET,2SK360E
	87-A30-086-040		C-TR,CSD1306E<200EZ,205EZ>
	87-A30-234-080		TR,CSC4115BC
DIODE			
	87-A40-535-080		DIODE,1N5393-GOODARK<200EZ,205EZ>
	87-A40-393-090		DIODE,1N5402GW(F20)<200LH,205U>
	87-A40-455-080		DIODE,RL203 GW<200U>
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-778-080		ZENER,UZ30BSD
	87-A40-291-080		DIODE,1N4148 (CPT)
	87-A40-764-080		ZENER,UZ10BSC
	87-A40-269-080		C-DIODE,MC2836
	87-A40-270-080		C-DIODE,MC2838
	87-A40-749-080		ZENER,UZ5.6BSB<200LH,205U>
	87-A40-748-080		ZENER,UZ5.6BSA
	87-A40-739-080		ZENER,UZ2.7BSA
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C3	87-010-759-080		C-CAP,U, 0.1-25F<200LH,205U>
C4	87-010-759-080		C-CAP,U, 0.1-25F<200LH,205U>
C5	87-010-759-080		C-CAP,U, 0.1-25F<200LH,205U>
C6	87-010-759-080		C-CAP,U, 0.1-25F<200LH,205U>
C9	87-010-759-080		C-CAP,U, 0.1-25F
C10	87-010-759-080		C-CAP,U, 0.1-25F
C11	87-010-759-080		C-CAP,U, 0.1-25F
C12	87-010-759-080		C-CAP,U, 0.1-25F
C19	87-A12-431-000		CAP,E 2200-50 M 85<200LH,205U>
C20	87-A12-431-000		CAP,E 2200-50 M 85<200LH,205U>
C21	87-A12-442-000		CAP,E 3300-25 M 85<EXCEPT 200U>
C21	87-A12-440-000		CAP,E 3300-35 M 85 IV LELON<200U>
C22	87-A12-381-000		CAP,E 2200-25 M 85<EXCEPT 200U>
C22	87-A12-441-000		CAP,E 2200-35 M 85 IV LELON<200U>
C25	87-010-385-080		CAP, ELECT 220-25V<200LH,205U>
C25	87-010-407-080		CAP, E 33-50V<200EZ,205EZ,200U>
C26	87-010-247-080		CAP, ELECT 100-50V<200LH,205U>
C26	87-010-407-080		CAP, E 33-50V<200EZ,205EZ,200U>
C30	87-010-393-080		CAP, E 100-35V<200EZ,205EZ,200U>
C30	87-010-247-080		CAP, ELECT 100-50V<200LH,205U>
C31	87-010-263-080		CAP, ELECT 100-10V
C35	87-010-406-080		CAP, ELECT 22-50
C36	87-010-381-080		CAP, ELECT 330-16V
C38	87-010-190-080		S CHIP F 0.01
C50	87-010-393-080		CAP, E 100-35V<200EZ,205EZ,200U>
C60	87-010-403-080		CAP, ELECT 3.3-50V
C61	87-010-380-080		CAP, E 47-16V<200EZ,205EZ,200U>
C61	87-010-260-080		CAP, ELECT 47-25V<200LH,205U>
C98	87-A12-317-080		C-CAP,U 0.1-50 Z F
C123	87-012-269-080		C-CAP,U 390P-50 B<200EZ,205EZ>
C124	87-012-269-080		C-CAP,U 390P-50 B<200EZ,205EZ>
C125	87-010-759-080		C-CAP,U, 0.1-25F
C126	87-010-759-080		C-CAP,U, 0.1-25F
C127	87-010-759-080		C-CAP,U, 0.1-25F
C128	87-010-759-080		C-CAP,U, 0.1-25F
C129	87-010-191-080		C-CAP,S 0.015-50 F<200EZ,205EZ>
C130	87-010-191-080		C-CAP,S 0.015-50 F<200EZ,205EZ>
C131	87-012-286-080		CAP, U 0.01-25
C132	87-012-286-080		CAP, U 0.01-25
C133	87-A12-317-080		C-CAP,U 0.1-50 Z F
C161	87-010-408-080		CAP, ELECT 47-50V<205U>
C162	87-010-408-080		CAP, ELECT 47-50V<205U>
C181	87-010-235-080		CAP,E 470-16 SME<200EZ,205EZ>
C181	87-010-387-080		CAP,E 470-25 SME<200LH,200U,205U>
C192	87-010-759-080		C-CAP,U, 0.1-25F<200EZ,205EZ>
C401	87-A12-319-080		C-CAP,U 0.1-25 K B
C402	87-A12-319-080		C-CAP,U 0.1-25 K B
C403	87-012-193-080		C-CAP,U 82P-50 CH
C404	87-012-193-080		C-CAP,U 82P-50 CH
C405	87-012-286-080		CAP, U 0.01-25
C406	87-012-286-080		CAP, U 0.01-25
C407	87-012-286-080		CAP, U 0.01-25
C408	87-012-286-080		CAP, U 0.01-25
C409	87-012-278-080		C-CAP,U 2200P-50 B
C410	87-012-278-080		C-CAP,U 2200P-50 B
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-405-080		CAP, ELECT 10-50V
C421	87-012-274-080		C-CAP,U 1000P-50 K B
C422	87-012-274-080		C-CAP,U 1000P-50 K B
C423	87-012-274-080		C-CAP,U 1000P-50 K B
C424	87-012-274-080		C-CAP,U 1000P-50 K B
C425	87-010-263-080		CAP, ELECT 100-10V
C426	87-010-263-080		CAP, ELECT 100-10V
C427	87-012-188-080		C-CAP,U 47P-50 CH
C428	87-012-188-080		C-CAP,U 47P-50 CH
C429	87-010-598-080		C-CAP,S 0.068-16VRK
C430	87-010-598-080		C-CAP,S 0.068-16VRK
C431	87-012-284-080		CAP, U 6800P-50
C432	87-012-284-080		CAP, U 6800P-50
C433	87-010-546-080		CAP, ELECT 0.33-50V
C434	87-010-546-080		CAP, ELECT 0.33-50V
C435	87-010-263-080		CAP, ELECT 100-10V
C440	87-010-759-080		C-CAP,U, 0.1-25F<200EZ,205EZ>
C441	87-010-787-080		CAP, U 0.022-25
C442	87-010-759-080		C-CAP,U 0.1-25 Z F
C443	87-010-759-080		C-CAP,U, 0.1-25F
C445	87-A10-039-080		C-CAP,U 470P-50 J CH
C446	87-010-401-080		CAP, ELECT 1-50V
C447	87-010-787-080		C-CAP,U 0.022-25<EXCEPT 200U,205U>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C452	87-010-382-080		CAP, ELECT 22-25V
C453	87-012-279-080		C-CAP,U 2700P-50 B
C454	87-012-279-080		C-CAP,U 2700P-50 B
C455	87-012-279-080		C-CAP,U 2700P-50 B
C456	87-012-286-080		CAP, U 0.01-25
C457	87-A12-361-080		CAP,M 5600P-100 J CP
C458	87-012-274-080		CHIP CAP,U 1000P-50B<200EZ,205EZ>
C459	87-A12-468-080		C-CAP,U 560P-50 J SL<200EZ,205EZ>
C460	87-010-759-080		C-CAP,U, 0.1-25F
C461	87-A12-466-080		C-CAP,U 390P-50 J SL
C462	87-A12-466-080		C-CAP,U 390P-50 J SL
C470	87-012-270-080		C-CAP,U 470P-50 K B
C605	87-012-275-080		C-CAP,U 1200P-50 B
C606	87-012-275-080		C-CAP,U 1200P-50 B
C609	87-010-785-080		C-CAP,U 0.015-25BK
C610	87-010-785-080		C-CAP,U0.015-25BK
C611	87-010-545-080		CAP, ELECT 0.22-50V
C612	87-010-545-080		CAP, ELECT 0.22-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V
C614	87-010-545-080		CAP, ELECT 0.22-50V
C615	87-012-172-080		CAPACITOR CHIP U 10P CH
C616	87-010-248-080		CAP, ELECT 220-10V
C617	87-010-248-080		CAP, ELECT 220-10V
C618	87-010-405-080		CAP, ELECT 10-50V
C625	87-010-598-080		C-CAP,S 0.068-16VRK
C626	87-010-598-080		C-CAP,S 0.068-16VRK
C630	87-016-669-080		C-CAP,S 0.1-25 K B
C677	87-012-286-080		CAP, U 0.01-25
CN102	87-A61-001-010		CONN,17P V BLK TAC-L17X-A3
CN401	87-A60-620-010		CONN,3P V 2MM JMT
CN451	87-A60-625-010		CONN,8P V 2MM JMT
CN602	87-099-194-010		CONN,6P 6216V
CNA401	86-ZM3-604-210		CONN ASSY,3P -PB
CNA451	8B-NFA-626-010		CONN,ASSY,8P -RPB
FFC602	88-906-251-110		FF-CABLE,6P 1.25
J101	87-A60-602-010		JACK,DIA6.3 BLK ST W/SW TC
J205	87-A60-545-010		JACK,PIN 4P W/R<205U>
J602	87-A60-881-010		JACK,PIN 2P MSP<EXCEPT 205U>
L101	87-A50-611-010		COIL,1UH K(CS)
L102	87-A50-611-010		COIL,1UH K(CS)
L451	87-007-342-010		COIL,OSC 85K BIAS
L451	87-007-342-010		COIL,OSC 85K BIAS
⚠ PT1	8B-NFA-611-010		PT,BNF-A EZ-LOW<200EZ,205EZ>
⚠ PT1	8B-NFA-609-010		PT,BNF-A LH<200LH>
⚠ PT1	8B-NFA-607-010		PT,BNF-A U<200U>
⚠ PT1	8B-NFA-613-010		PT,BNF-A U-HI-SUR<205U>
⚠ PT2	8B-NF9-665-010		PT,SUB BNF E (TAM)<200EZ,205EZ>
⚠ PT2	8B-NF9-663-010		PT,SUB BNF H (TAM)<200LH>
⚠ PT2	8B-NF9-661-010		PT,SUB BNF U (TAM)<200U,205U>
⚠ RY1	87-A91-339-010		RELAY,AC DC12V G5PA-2<200LH>
⚠ RY181	87-A92-072-010		RELAY,AC DC12V HRM3H-S-1POLE<U>
⚠ RY181	87-A91-418-010		RELAY,AC12V G5PA-1-M<200EZ,205EZ>
⚠ S181	87-A90-165-010		SW,SL 1-2-3 SWS2301<200LH>
⚠ T181	87-A60-317-010		TERMINAL, 1P MSC
⚠ T182	87-A60-317-010		TERMINAL, 1P MSC
TM101	87-A61-452-010		TERMINAL,SP 4P(MSC)

FRONT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C301	87-010-759-080		C-CAP,U, 0.1-25F
C303	87-012-280-080		CAP, U 3300P-50
C304	87-016-116-080		C-CAP,U 0.015-25 J B CB
C305	87-012-184-080		C-CAP,U 33P-50 CH
C306	87-012-274-080		CHIP CAP,U 1000P-50B
C307	87-012-274-080		CHIP CAP,U 1000P-50B
C308	87-010-544-040		CAP,E 0.1-50 SME
C309	87-010-404-040		CAP,E 4.7-50 SME
C310	87-012-286-080		CAP, U 0.01-25
C311	87-A12-052-080		C-CAP,S 0.033-25 J B
C312	87-012-195-080		C-CAP,U 100P-50CH
C501	87-010-759-080		C-CAP,U, 0.1-25F
C502	87-010-759-080		C-CAP,U, 0.1-25F
C503	87-012-278-080		C-CAP,U 2200P-50 B
C504	87-016-460-080		C-CAP,S 0.22-16 B
C505	87-010-248-040		CAP,E 220-10 SME
C507	87-010-400-040		CAP,E 0.47-50
C508	87-012-172-080		CAPACITOR CHIP U 10P CH
C509	87-A12-462-080		C-CAP,U 180P-50 J SL
C510	87-012-270-080		CAP, U 470P-50
C511	87-010-759-080		C-CAP,U, 0.1-25F
C512	87-012-268-080		C-CAP,U 330P-50 B
C513	87-010-829-080		CAP, U 0.047-16
C514	87-012-286-080		CAP, U 0.01-25
C515	87-012-274-080		CHIP CAP,U 1000P-50B
C516	87-010-759-080		C-CAP,U, 0.1-25F
C517	87-012-272-080		C-CAP,U 680P-50 B
C518	87-012-272-080		C-CAP,U 680P-50 B
C519	87-010-759-080		C-CAP,U, 0.1-25F
C520	87-010-246-040		CAP,E 47-35 SME
C521	87-A12-317-080		C-CAP,U 0.1-50 Z F
C522	87-010-263-040		CAP,E 100-10
C523	87-010-404-040		CAP,E 4.7-50 SME
C524	87-010-404-040		CAP,E 4.7-50 SME
C525	87-010-260-040		CAP,E 47-25 SME
C527	87-010-759-080		C-CAP,U, 0.1-25F
C528	87-010-759-080		C-CAP,U, 0.1-25F
CN502	87-099-196-010		CONN,8P 6216 V
CN504	87-A60-136-010		CONN,11P V FE
FFC502	88-908-201-110		FF-CABLE,8P 1.25
FFC504	88-911-131-110		FF-CABLE,11P 1.25 130MM
FL501	8B-NFA-601-010		FL,HNA-10SS19T
L501	87-A50-655-010		COIL,CLK 4.19MHZ(TOKO) 7KLY
LED501	87-A40-317-080		LED,SLR-342VCT31 RED
S201	87-A90-164-080		SW,TACT SKQAB(N)
S202	87-A90-164-080		SW,TACT SKQAB(N)
S203	87-A90-164-080		SW,TACT SKQAB(N)
S204	87-A90-164-080		SW,TACT SKQAB(N)
S205	87-A90-164-080		SW,TACT SKQAB(N)
S206	87-A90-164-080		SW,TACT SKQAB(N)
S207	87-A90-164-080		SW,TACT SKQAB(N)
S208	87-A90-164-080		SW,TACT SKQAB(N)
S209	87-A90-164-080		SW,TACT SKQAB(N)
S210	87-A90-164-080		SW,TACT SKQAB(N)<205EZ>
S211	87-A90-164-080		SW,TACT SKQAB(N)<205EZ>
S212	87-A90-164-080		SW,TACT SKQAB(N)<205EZ>
S213	87-A90-164-080		SW,TACT SKQAB(N)
S214	87-A90-164-080		SW,TACT SKQAB(N)
S215	87-A90-164-080		SW,TACT SKQAB(N)
S216	87-A90-164-080		SW,TACT SKQAB(N)
S217	87-A90-164-080		SW,TACT SKQAB(N)
S218	87-A90-164-080		SW,TACT SKQAB(N)
S219	87-A90-164-080		SW,TACT SKQAB(N)
S220	87-A90-164-080		SW,TACT SKQAB(N)
S221	87-A90-164-080		SW,TACT SKQAB(N)
S222	87-A90-164-080		SW,TACT SKQAB(N)
S223	87-A90-164-080		SW,TACT SKQAB(N)
S230	87-A92-054-010		SW,RTRY EC12E24504

TUNER C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C771	87-010-263-080		CAP, ELECT 100-10V
C772	87-012-286-080		CAP, U 0.01-25
C779	87-010-949-080		C-CAP,S 0.01-50 BJ<200EZ,205EZ>
C780	87-010-949-080		C-CAP,S 0.01-50 BJ<200EZ,205EZ>
C782	87-012-286-080		C-CAP,U 0.01-25 K B
C783	87-012-286-080		C-CAP,U 0.01-25 K B
C784	87-012-286-080		C-CAP,U 0.01-25 K B
C785	87-012-286-080		C-CAP,U 0.01-25 K B
C786	87-012-286-080		C-CAP,U 0.01-25 K B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C788	87-012-167-080		C-CAP,U 5P-50 CH
C789	87-A12-052-080		C-CAP,S 0.033-25<200LH,200U,205U>
C789	87-016-118-080		C-CAP,U0.022-25BJ<200EZ,205EZ>
C790	87-A12-052-080		C-CAP,S 0.033-25<200LH,200U,205U>
C790	87-016-118-080		C-CAP,U0.022-25BJ<200EZ,205EZ>
C791	87-010-759-080		C-CAP,U, 0.1-25F
C792	87-012-286-080		C-CAP,U 0.01-25 K B
C793	87-010-404-080		CAP, ELECT 4.7-50V
C795	87-012-286-080		C-CAP,U 0.01-25 K B
C796	87-012-286-080		C-CAP,U 0.01-25 K B
C797	87-010-405-080		CAP, ELECT 10-50V
C798	87-012-286-080		C-CAP,U 0.01-25 K B
C799	87-010-265-080		CAP, ELECT 33-16V
C800	87-012-369-080		C-CAP,S 0.047-50F
C801	87-010-403-080		CAP, ELECT 3.3-50V
C802	87-012-369-080		C-CAP,S 0.047-50F
C803	87-010-787-080		CAP, U 0.022-25
C804	87-010-263-080		CAP, ELECT 100-10V
C807	87-010-400-080		CAP, ELECT 0.47-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-759-080		C-CAP,U, 0.1-25F
C814	87-012-286-080		CAP, U 0.01-25
C815	87-010-400-080		CAP, ELECT 0.47-50V
C816	87-010-400-080		CAP, ELECT 0.47-50V
C818	87-012-276-080		CAP, CHIP SS 1500 PBK<200EZ,205EZ>
C821	87-010-405-080		CAP, ELECT 10-50V
C823	87-012-349-080		C-CAP,S 1000P-50 CH<200EZ,205EZ>
C823	87-A10-978-080		C-CAP,U 820P-25<200LH,200U,205U>
C824	87-010-404-080		CAP, ELECT 4.7-50V
C825	87-010-829-080		CAP, U 0.047-16
C831	87-010-406-080		CAP, ELECT 22-50<200EZ,205EZ>
C842	87-012-286-080		C-CAP,U 0.01-25 K B
C844	87-012-286-080		C-CAP,U 0.01-25 K B
C850	87-010-260-080		CAP, ELECT 47-25V
C851	87-012-286-080		C-CAP,U 0.01-25 K B
C852	87-012-286-080		C-CAP,U 0.01-25 K B
C853	87-012-286-080		C-CAP,U 0.01-25 K B
C858	87-010-831-080		C-CAP,U 0.1-16 Z F
C859	87-010-831-080		C-CAP,U 0.1-16 Z F<200EZ,205EZ>
C860	87-012-286-080		C-CAP,U 0.01-25 K B<200EZ,205EZ>
C869	87-012-286-080		CAP, U 0.01-25<205EZ>
C870	87-012-274-080		CHIP CAP,U 1000P-50B<205EZ>
C871	87-012-199-080		CAP 220P<205EZ>
C872	87-012-199-080		CAP 220P<205EZ>
C873	87-A10-039-080		C-CAP,U 470P-50 J CH<205EZ>
C874	87-010-405-080		CAP, ELECT 10-50V<205EZ>
C875	87-010-759-080		C-CAP,U, 0.1-25F<205EZ>
C876	87-010-405-080		CAP, ELECT 10-50V<205EZ>
C877	87-012-286-080		CAP, U 0.01-25<205EZ>
C878	87-012-184-080		C-CAP,U 33P-50 CH<205EZ>
C879	87-012-180-080		C-CAP,U 22P-50 CH<205EZ>
C901	87-018-145-080		CAP,TC-U 6.8P-50<200LH,200U,205U>
C904	87-012-286-080		CAP, U 0.01-25<200LH,200U,205U>
C905	87-012-286-080		CAP, U 0.01-25<200LH,200U,205U>
C907	87-012-286-080		CAP, U 0.01-25<200LH,200U,205U>
C908	87-A10-915-080		C-CAP,U 1000P-25<200LH,200U,205U>
C909	87-012-286-080		CAP, U 0.01-25<200LH,200U,205U>
C910	87-012-174-080		C-CAP, CERA SS 12P<200LH,200U,205U>
C911	87-012-170-080		C-CAP,U 8P-50 CH<200LH,200U,205U>
C912	87-012-195-080		C-CAP,U 100P-50CH<200LH,200U,205U>
C913	87-012-286-080		CAP, U 0.01-25<200LH,200U,205U>
C914	87-012-166-080		C-CAP,U 4P-50 CH<200LH,200U,205U>
C915	87-012-174-080		C-CAP, CERA SS 12P<200LH,200U,205U>
C916	87-012-180-080		C-CAP,U 22P-50 CH<200LH,200U,205U>
C917	87-012-186-080		C-CAP,U 39P-50 CH<200LH,200U,205U>
C918	87-A10-039-080		C-CAP,U 470P-50<200LH,200U,205U>
C921	87-012-195-080		C-CAP,U 100P-50CH<200LH,200U,205U>
C922	87-012-174-080		C-CAP, CERA SS 12P<200LH,200U,205U>
C940	87-012-286-080		CAP, U 0.01-25<200EZ,205EZ>
C942	87-012-165-080		CAP 3P<200EZ,205EZ>
C947	87-012-286-080		CAP, U 0.01-25<200EZ,205EZ>
C948	87-A10-039-080		C-CAP,U 470P-50 J CH<200EZ,205EZ>
C952	87-012-286-080		CAP, U 0.01-25<200EZ,205EZ>
C957	87-012-174-080		C-CAP, CERA SS 12P CHJ<200EZ,205EZ>
C958	87-012-286-080		C-CAP,U 0.01-25 K B<200EZ,205EZ>
C959	87-010-831-080		C-CAP,U 0.1-16 Z F<200LH,200U,205U>
C960	87-010-831-080		C-CAP,U 0.1-16 Z F
C961	87-012-167-080		C-CAP,U 5P-50 CH<200LH,200U,205U>
C962	87-010-401-080		CAP, ELECT 1-50V<200EZ,205EZ>
C963	87-015-785-080		C-CAP,0.1-25 Z F C3216
C971	87-010-381-080		CAP, ELECT 330-16V
C972	87-010-404-080		CAP, ELECT 4.7-50V
C973	87-012-286-080		C-CAP,U 0.01-25 K B
C974	87-012-286-080		C-CAP,U 0.01-25 K B
C979	87-012-195-080		C-CAP,U 100P-50 J CH
C981	87-010-260-080		CAP, ELECT 47-25V
C982	87-010-759-080		C-CAP,U, 0.1-25F
C983	87-012-286-080		C-CAP,U 0.01-25 K B
C984	87-012-286-080		C-CAP,U 0.01-25 K B
C985	87-012-195-080		C-CAP,U 100P-50CH<200EZ,205EZ>
C987	87-012-286-080		C-CAP,U 0.01-25 K B
C989	87-012-286-080		C-CAP,U 0.01-25 K B<200EZ,205EZ>
C991	87-012-176-080		CAP 15P
C992	87-012-176-080		CAP 15P
C993	87-010-178-080		CHIP CAP 1000P
C995	87-010-178-080		CHIP CAP 1000P
C997	87-010-759-080		C-CAP,U, 0.1-25F
C998	87-010-260-080		CAP, ELECT 47-25V
C999	87-012-286-080		C-CAP,U 0.01-25 K B
CF831	87-008-423-010		CERAMIC FILTER, SFE10.7<EZ>
CF831	87-008-261-010		FILTER, SFE10.7MA5-A<EXCEPT EZ>
CF832	82-785-747-010		CF MS2 GHY R<200EZ,205EZ>
CF832	87-008-261-010		FILTER, SFE10.7MA5-A<EXCEPT EZ>
D902	87-A40-128-080		C-VARI-CAP,HVU202A<EXCEPT EZ>
D903	87-A40-128-080		C-VARI-CAP,HVU202A<EXCEPT EZ>
FFE831	A8-6ZA-199-170		6ZA-1 FEENC<200EZ,205EZ>
J831	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02<EXCEPT EZ>
J832	87-A60-403-010		TERMINAL,ANT PAL 2P HSP-312V05<EZ>
L801	87-A50-608-010		COIL,FM DET-N(TOK)
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
L811	87-005-847-080		COIL,2.2UH(CECS)
L832	87-005-847-080		COIL,2.2UH(CECS)
L861	87-005-847-080		COIL,2.2UH(CECS)<205EZ>
L902	88-ZA1-602-110		COIL,FM-RF-U2 2G<200LH,200U,205U>
L903	88-ZA1-601-010		COIL,FM-RF-U1 2G<200LH,200U,205U>
L904	87-005-847-080		COIL,2.2UH(CECS)<200LH,200U,205U>
L905	88-ZA1-624-010		COIL,FM IFT 7-6.2 (COILS)<EXCEPT EZ>
L906	88-ZA1-603-010		COIL,FM-OSC-U 2G<200LH,200U,205U>
L941	87-A50-020-010		COIL,ANT LW(COI)<200EZ,205EZ>
L942	87-A50-019-010		COIL,OSC LW(COI)<200EZ,205EZ>
L951	8A-NF8-668-010		COIL,AM PACK 2(TOK)<200EZ,205EZ>
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)<200LH,200U,205U>
R790	87-012-286-080		C-CAP,U 0.01-25 K B
R991	87-012-195-080		C-CAP,U 100P-50 J CH
R993	87-012-195-080		C-CAP,U 100P-50 J CH
R995	87-012-195-080		C-CAP,U 100P-50 J CH
TC942	87-A91-774-080		TRIMMER,PLY 30P 6.8X5.4 CDYL<EZ>
X862	87-A70-307-010		VIB,XTAL 4.332MHZ CSA-309ST<205EZ>
X992	87-A70-306-010		VIB,XTAL 4.500MHZ CSA-309ST

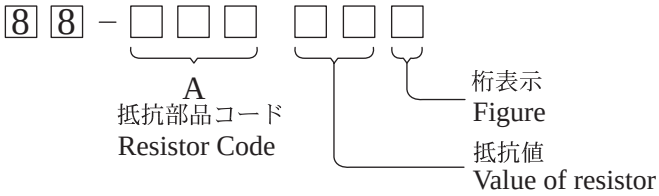
AMP C.B

C32	87-012-286-080		CAP, U 0.01-25
C33	87-010-263-080		CAP, ELECT 100-10V<200U,205U>
C34	87-010-247-080		CAP, ELECT 100-50V<200LH,205U>
C34	87-010-380-080		CAP, ELECT 47-16V<200EZ,205EZ,200U>
C101	87-012-279-080		C-CAP,U 2700P-50 B<200LH,205U>
C101	87-012-281-080		C-CAP,U 3900P-50 B<200EZ,205EZ,200U>
C102	87-012-279-080		C-CAP,U 2700P-50 B<200LH,205U>

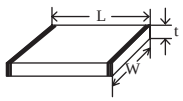
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C102	87-012-281-080		C-CAP,U 3900P-50 B<200EZ,205EZ,200U>
C103	87-010-545-080		CAP, ELECT 0.22-50V
C104	87-010-545-080		CAP, ELECT 0.22-50V
C105	87-012-282-080		CAP, U 4700P-50<200EZ,205EZ,200U>
C105	87-012-274-080		CHIP CAP,U 1000P-50B<200LH,205U>
C106	87-012-282-080		CAP, U 4700P-50<200EZ,205EZ,200U>
C106	87-012-274-080		CHIP CAP,U 1000P-50B<200LH,205U>
C107	87-010-403-080		CAP, ELECT 3.3-50V
C108	87-010-403-080		CAP, ELECT 3.3-50V
C111	87-010-406-080		CAP, ELECT 22-50<200EZ,205EZ,200U>
C111	87-010-391-080		CAP,E 10-35 SME<200LH,205U>
C112	87-010-406-080		CAP, ELECT 22-50<200EZ,205EZ,200U>
C112	87-010-391-080		CAP,E 10-35 SME<200LH,205U>
C113	87-A10-946-080		C-CAP,S 220P-100 J CH<EXCEPT EZ>
C113	87-012-199-080		CAP 220P<200EZ,205EZ>
C114	87-A10-946-080		C-CAP,S 220P-100<200LH,200U,205U>
C114	87-012-199-080		CAP 220P<200EZ,205EZ>
C119	87-012-286-080		CAP, U 0.01-25
C120	87-012-286-080		CAP, U 0.01-25
C121	87-A12-317-080		C-CAP,U 0.1-50 Z F
C122	87-A12-317-080		C-CAP,U 0.1-50 Z F
C133	87-012-282-080		C-CAP,U, 4700P-50 K B
C140	87-012-278-080		C-CAP,U 2200P-50 B
C186	87-010-759-080		C-CAP,U, 0.1-25F<200LH,205U>
C187	87-010-405-080		CAP, ELECT 10-50V<200LH,205U>
C188	87-010-405-080		CAP, ELECT 10-50V<200LH,205U>
CN101	87-A61-015-010		CONN,17P H BLK TAC-L17P-A3
R129	87-A00-257-080		RES,M/F 0.15-1W J<200LH,205U>
R130	87-A00-257-080		RES,M/F 0.15-1W J<200LH,205U>
R131	87-A00-257-080		RES,M/F 0.15-1W J<200LH,205U>
R131	87-A00-258-080		RES,M/F 0.22-1W J<200U>
R132	87-A00-257-080		RES,M/F 0.15-1W J<200LH,205U>
R132	87-A00-258-080		RES,M/F 0.22-1W J<200U>
TH101	87-A91-042-080		C-THMS,100K 55001<200LH,200U,205U>
TH102	87-A91-042-080		C-THMS,100K 55001<200LH,200U,205U>
DECK C.B			
CN1	87-099-753-010		CONN,11P H 9604
SFR1	87-024-581-010		SFR,3.3K DIA6V K0A
SOL1	82-ZM1-618-410		SOL ASSY,27
SOL2	82-ZM1-618-410		SOL ASSY,27
SW1	87-A90-673-010		SW,MICRO ESE11SH1C
SW2	87-A91-500-010		SW,MICRO MPU11470MLB0
SW3	87-A91-500-010		SW,MICRO MPU11470MLB0
SW4	87-A91-500-010		SW,MICRO MPU11470MLB0
SW5	87-A90-673-010		SW,MICRO ESE11SH1C
W1	82-ZM3-601-010		RBN-CORD,4P-75

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

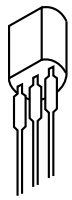
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

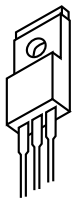
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



2SA1980G
CDA1585BC
CSC4115BC
KTC3198GR

2SA1981Y
2SC5343G

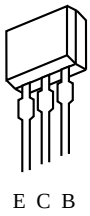


2SB1342
2SB1370
2SB1677
2SB1686

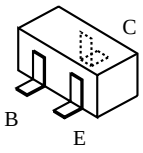
2SD1933
2SD2619
2SD2642

CC5551

2SK2937

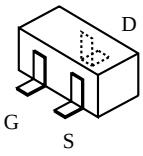


2SJ460
2SK2541

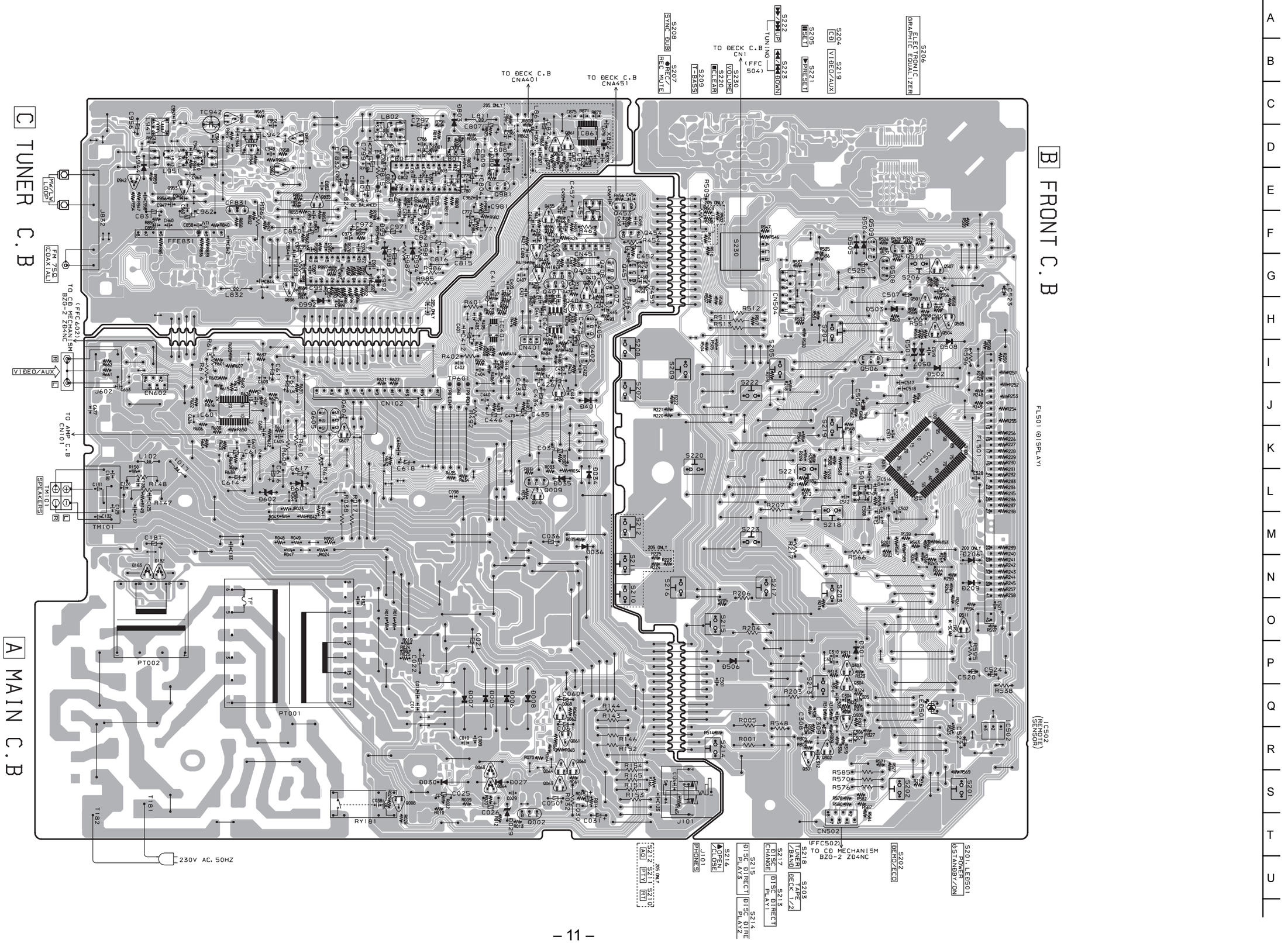


2SA1235F
2SC2714O
2SC3052F
CMBT5551
CMBT5401

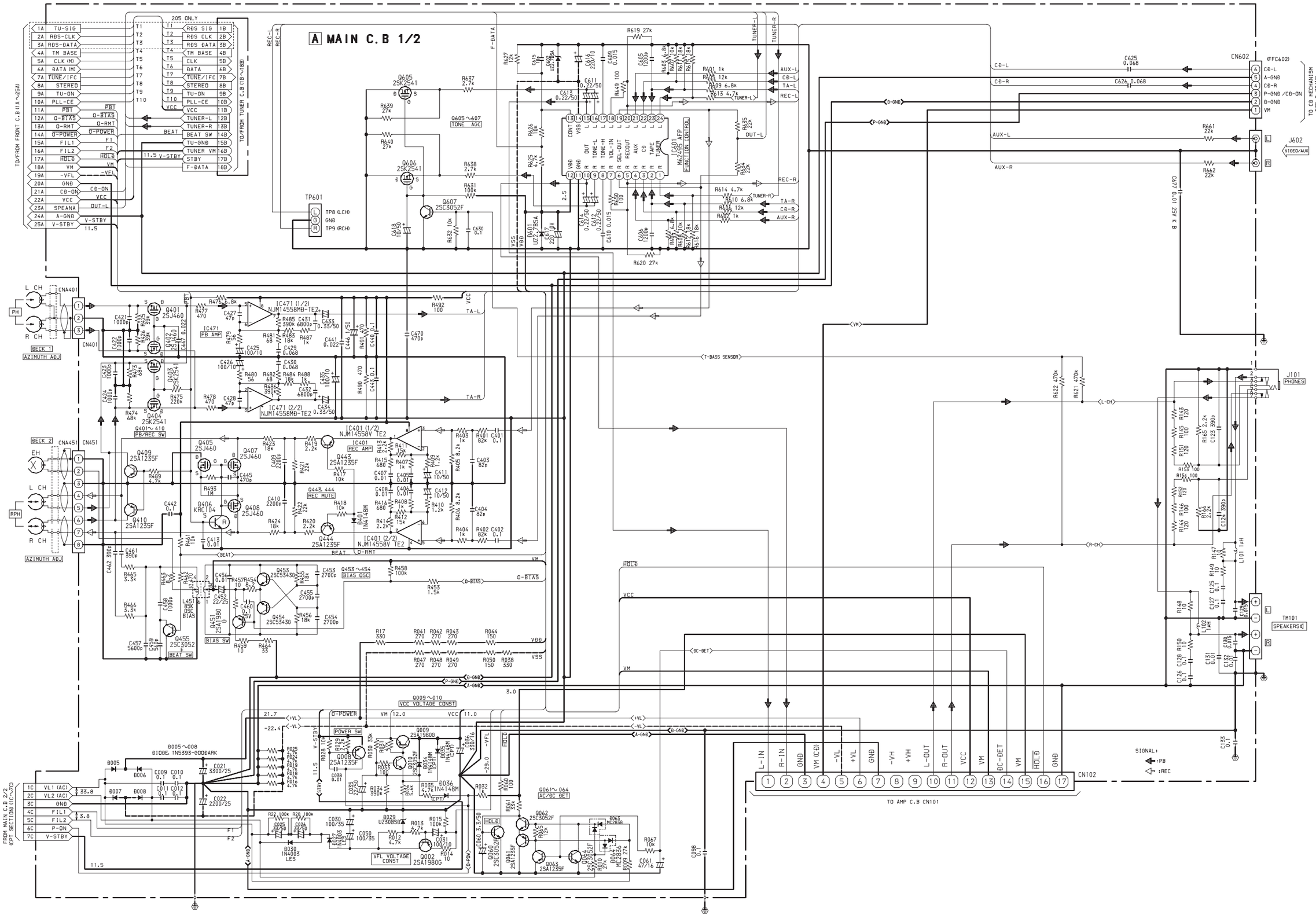
CSD1306E
KRA102S
KRA107S
KRC102S-RTK
KRC104S



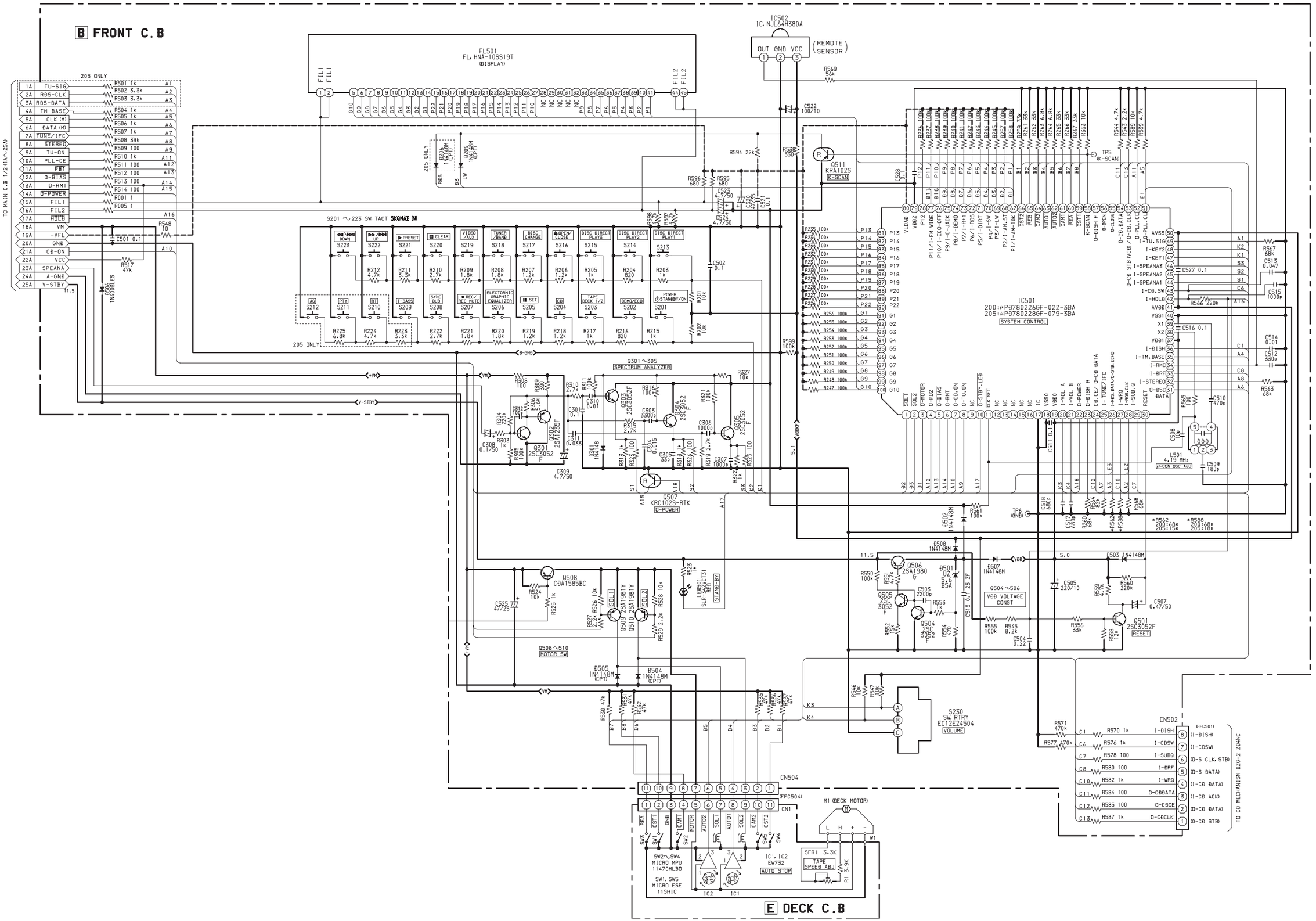
2SK360E


C TUNER C.B
B FRONT C.B
A MAIN C.B
TO DECK C.B CNA401
TO DECK C.B CNA451
TO DECK C.B CN1 (FFC 504)
TO CD MECHANISM BZG-2 Z04NC (FFC602)
TO AMP C.B CN101
SPEAKERS
TM101
FM 75Ω (COAXIAL)
AM/LW LOOP
VIDEO/AUX
PT001
PT002
TF
T181
T182
RY181
230V AC 50HZ
J101
PHONES
CN102
CN401
CN451
CN504
CN502
CN602
IC601
IC501
IC502 (REMOTE SENSOR)
FL501 (DISPLAY)
S201 POWER
S202 DEMO/ECO
S203 TAPE DECK 1/2
S204 CD
S205 SET
S206 ELECTRONIC GRAPHIC EQUALIZER
S207 REC/REC MUTE
S208 SYNC DUB
S209 T-BASS
S210 RT
S211 PTY
S212 AG
S213 DISC DIRECT PLAY1
S214 DISC DIRECT PLAY2
S215 DISC DIRECT PLAY3
S216 OPEN/CLOSE
S217 DISC CHANGE
S218 TUNER/BAND
S219 VIDEO/AUX
S220 CLEAR
S221 PRESET
S222 TUNING UP
S223 TUNING DOWN
S230 VOLUME
205 ONLY
200 ONLY

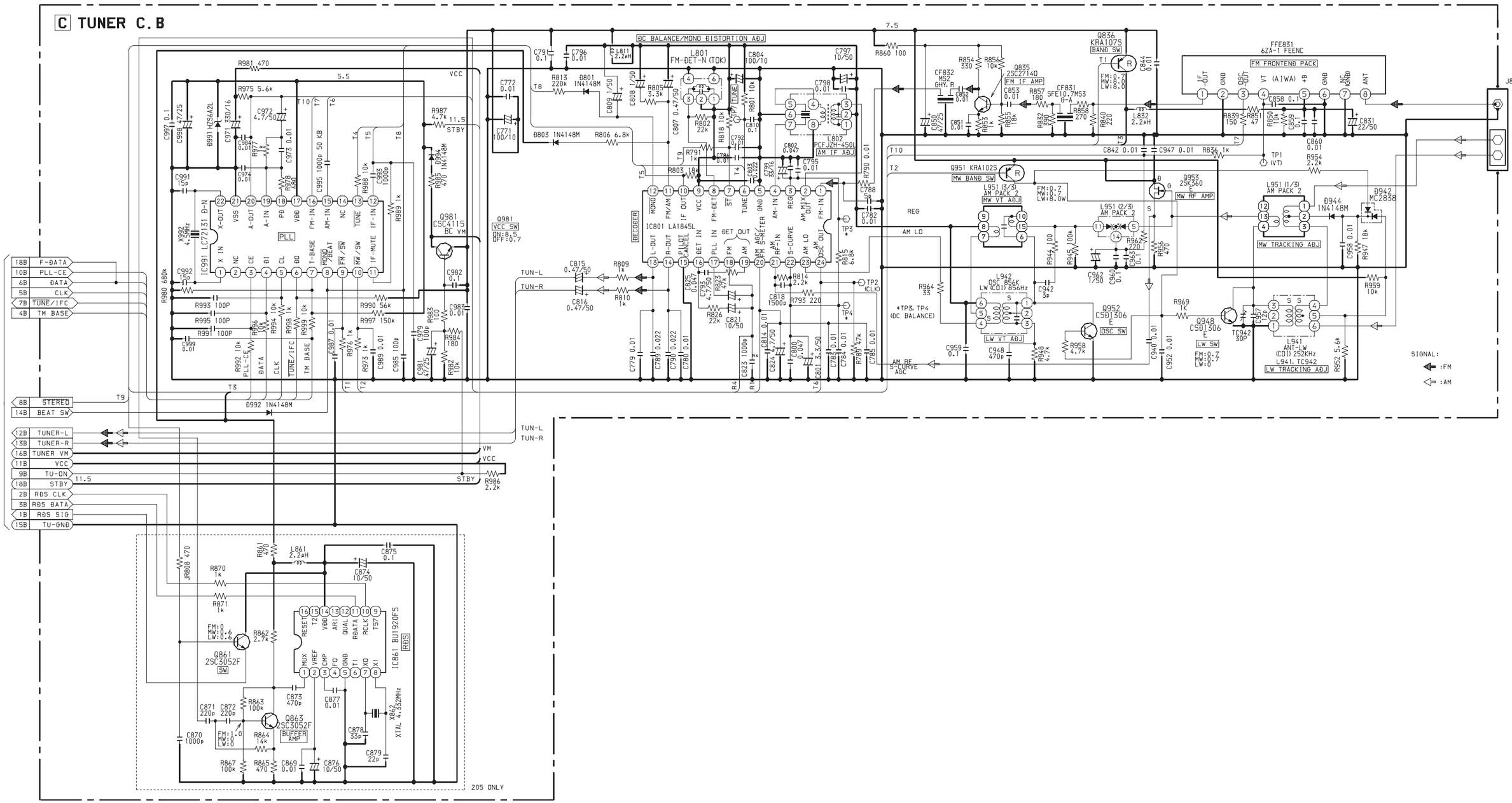
SCHEMATIC DIAGRAM – 1 (MAIN 1/2)<EZ>

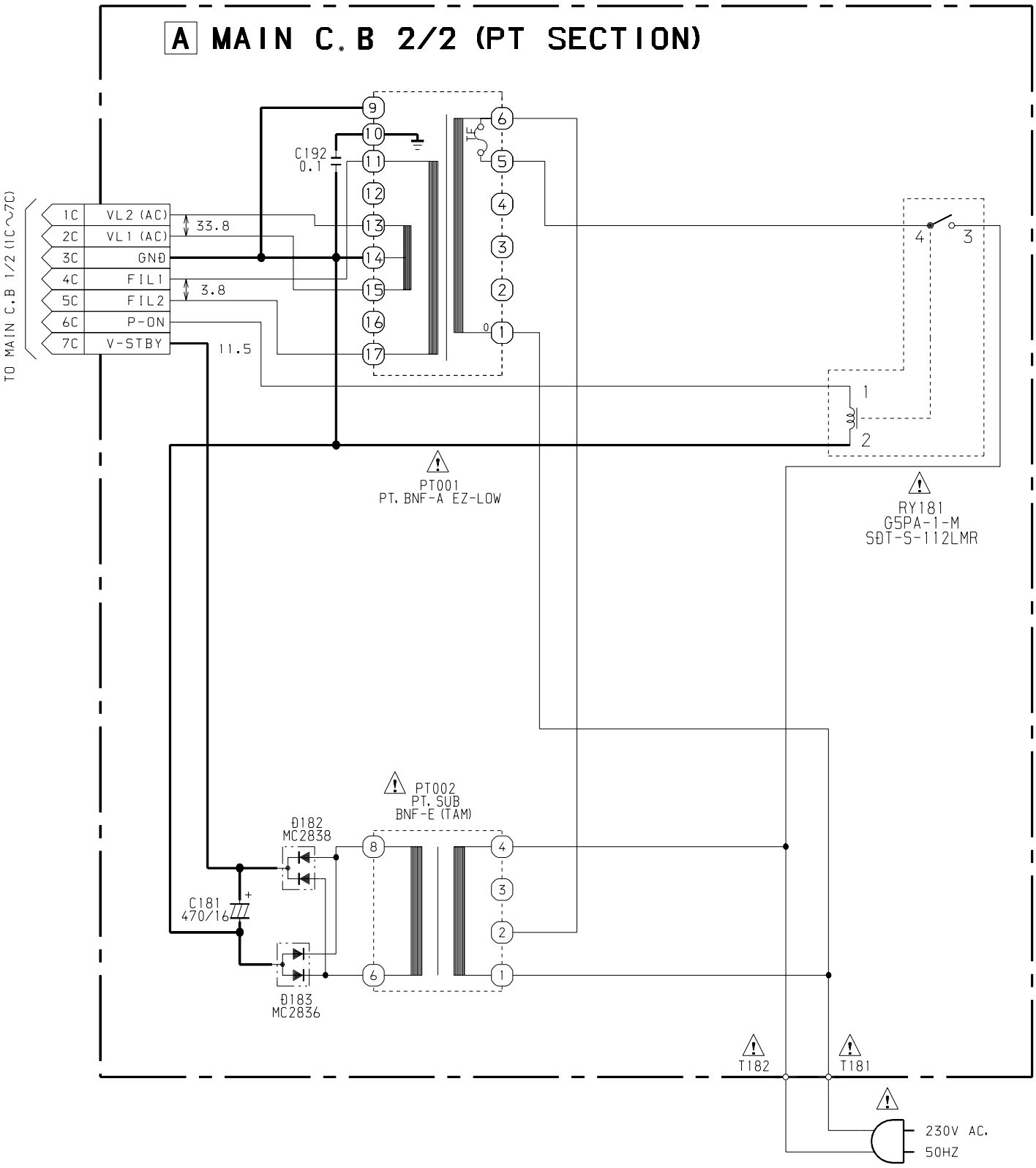


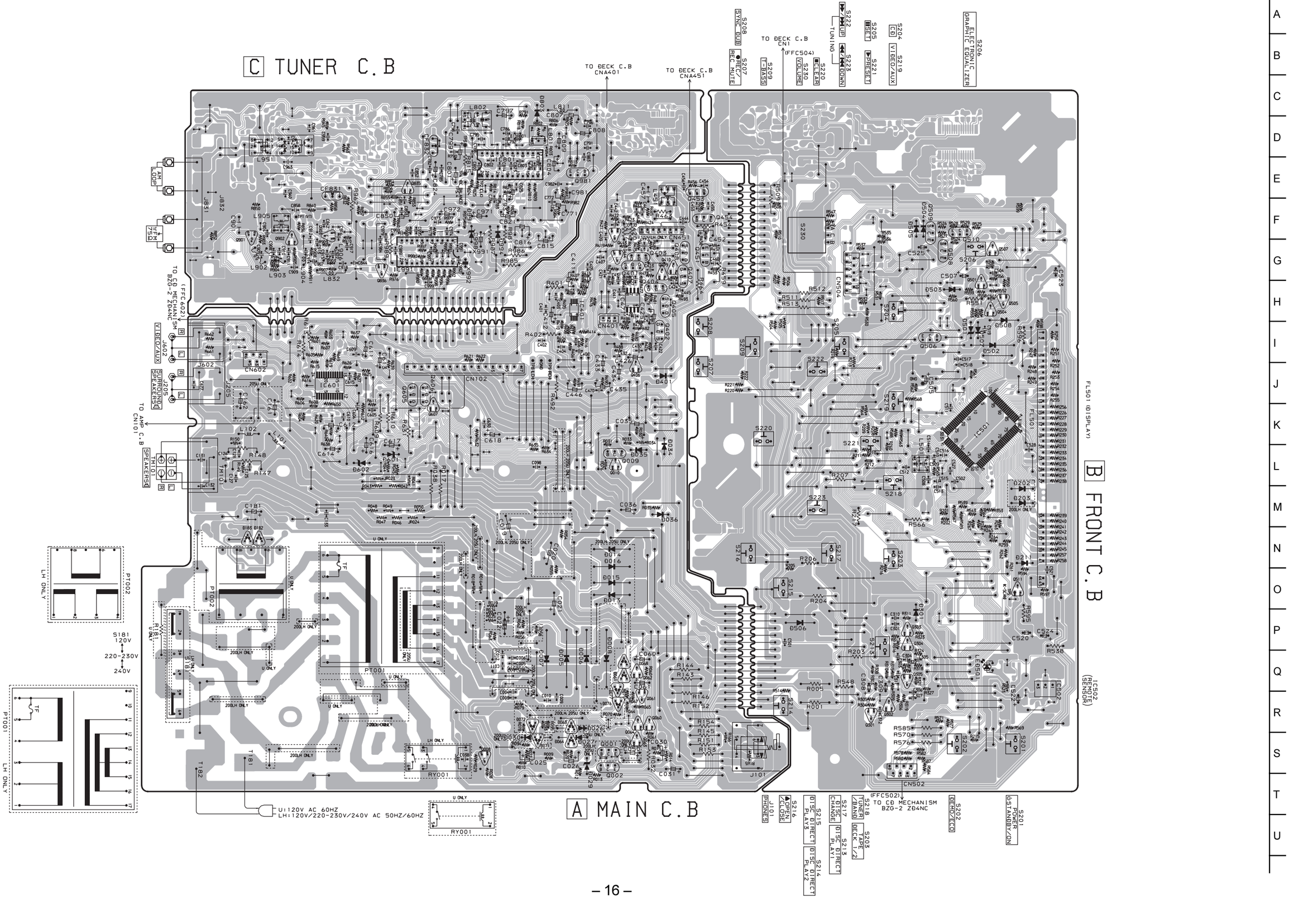
SCHEMATIC DIAGRAM – 2 (FRONT / DECK)<EZ>



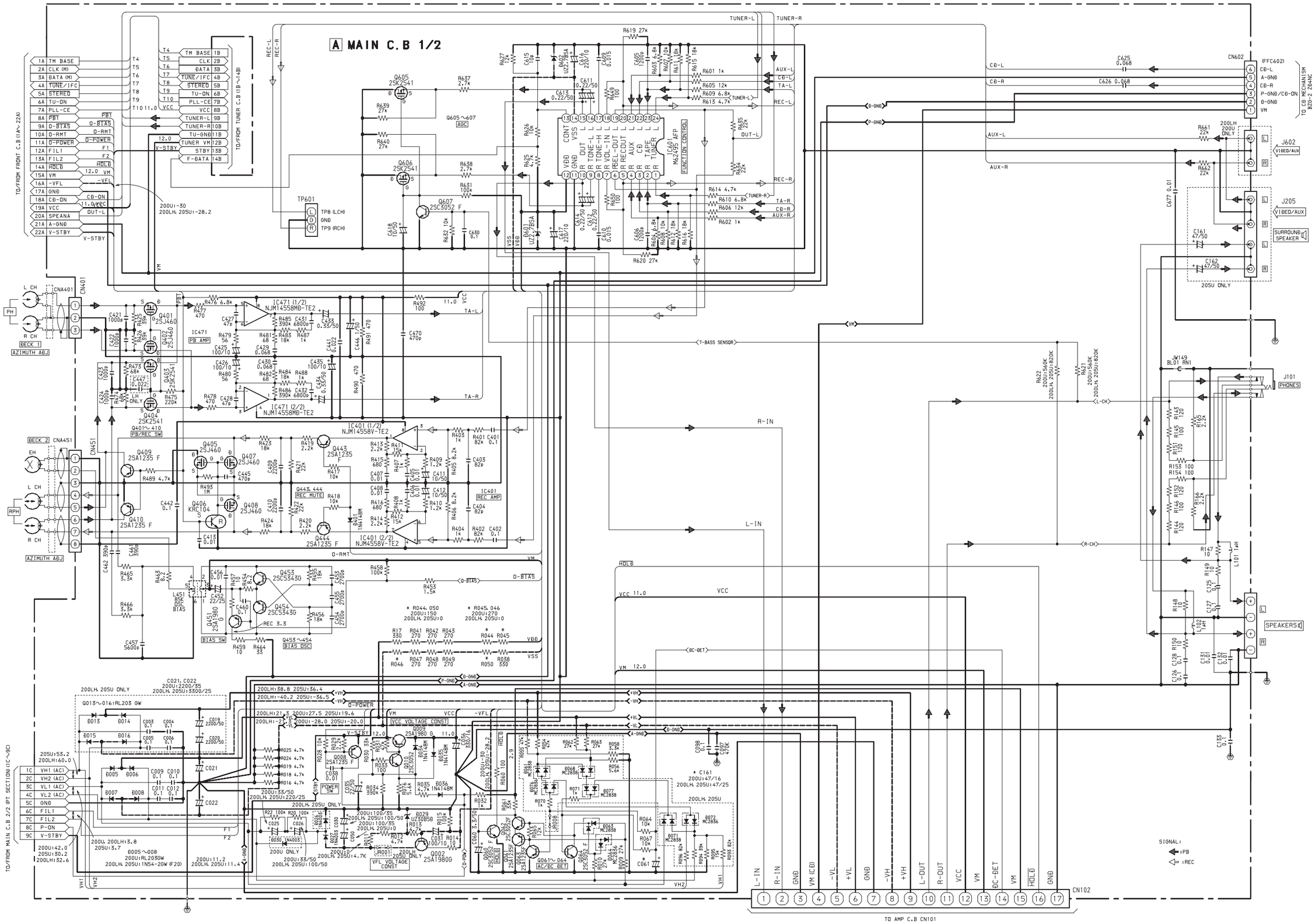
SCHEMATIC DIAGRAM – 3 (TUNER)<EZ>



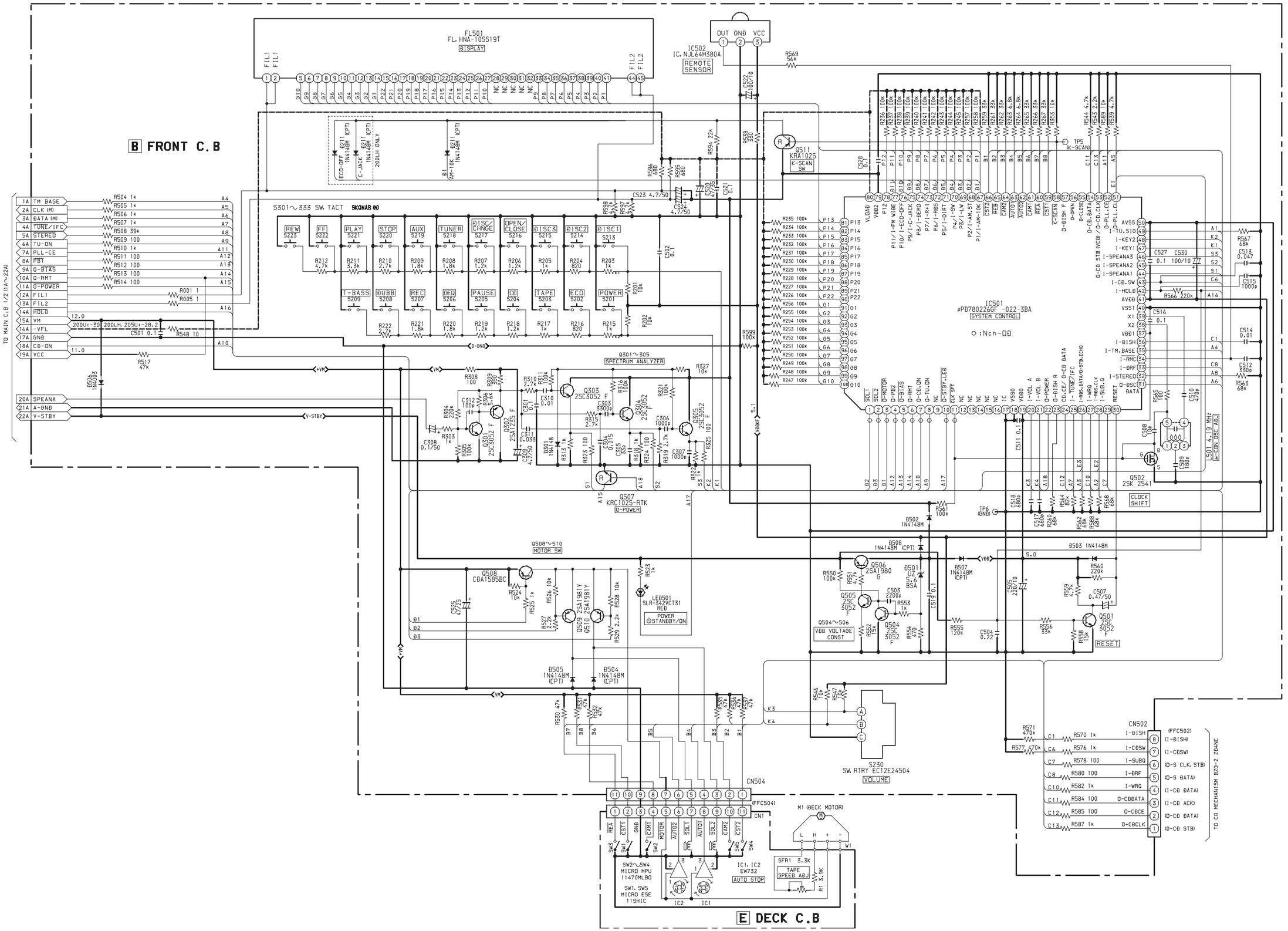

A MAIN C.B 2/2 (PT SECTION)
TO MAIN C.B 1/2 (1C~7C)
1C VL2 (AC)
2C VL1 (AC)
3C GND
4C FIL1
5C FIL2
6C P-ON
7C V-STBY
33.8
3.8
11.5
C192
0.1
TF
PT001
PT. BNF-A EZ-LOW
RY181
G5PA-1-M
SDT-S-112LMR
PT002
PT. SUB
BNF-E (TAM)
D182
MC2838
D183
MC2836
C181
470/16
T182
T181
230V AC.
50HZ


C TUNER C.B
A MAIN C.B
B FRONT C.B
TO DECK C.B CN4401
TO DECK C.B CN4451
TO DECK C.B CN1 (FFC504)
S208 SYNC BUB
S207 REC/REC MUTE
S209 T-BASS
S250 VOLUME
S220 CLEAR
S222 UP/TUNING
S223 DOWN/TUNING
S205 SET
S221 PRESET
S204 CD
S219 VIDEO/AUX
S204 ELECTRONIC GRAPHIC EQUALIZER
AM LOOP
FM
TM101 SPEAKERS
J602 VIDEO/AUX
CN602
(FFC602) TO CD MECHANISM BZG-2 Z04NC
CN101 TO AMP C.B
PT002
PT001
S181 120V 220-230V 240V
U:120V AC 60HZ
LH:120V/220-230V/240V AC 50HZ/60HZ
RY001
CN102
CN401
CN504
IC502 (REMOTE SENSOR)
FL501 (DISPLAY)
IC501
J101 PHONES
S216 OPEN/CLOSE
S215 DISC DIRECT PLAY3
S214 DISC DIRECT PLAY2
S217 CHANGE
S213 DISC DIRECT PLAY1
S218 TUNER BAND
S203 TAPE DECK 1/2
(FFC502) TO CD MECHANISM BZG-2 Z04NC
CN502
S202 DEMO/ECO
S201 POWER STANDBY/ON

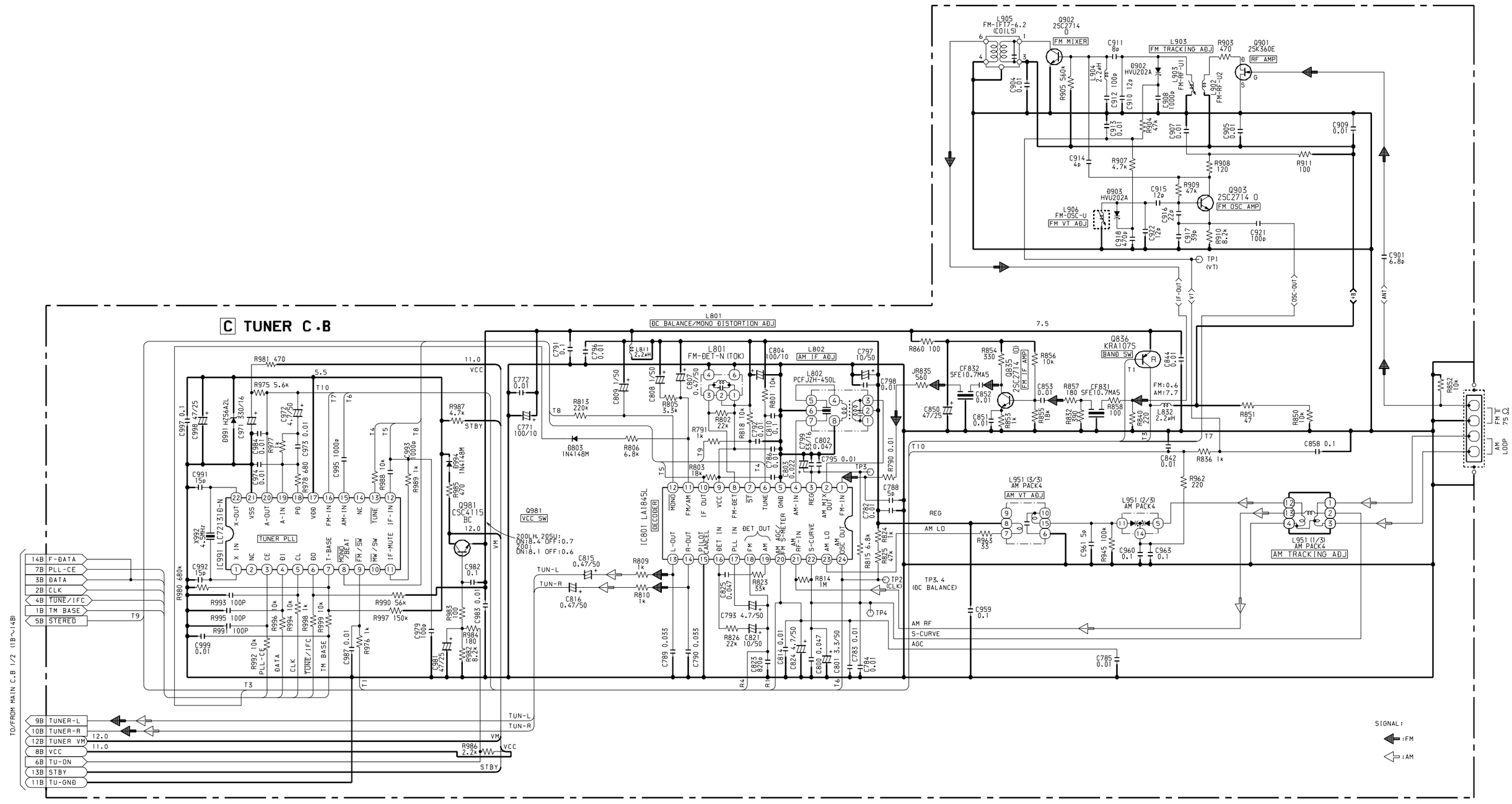
SCHEMATIC DIAGRAM – 5 (MAIN 1/2)<U,LH>



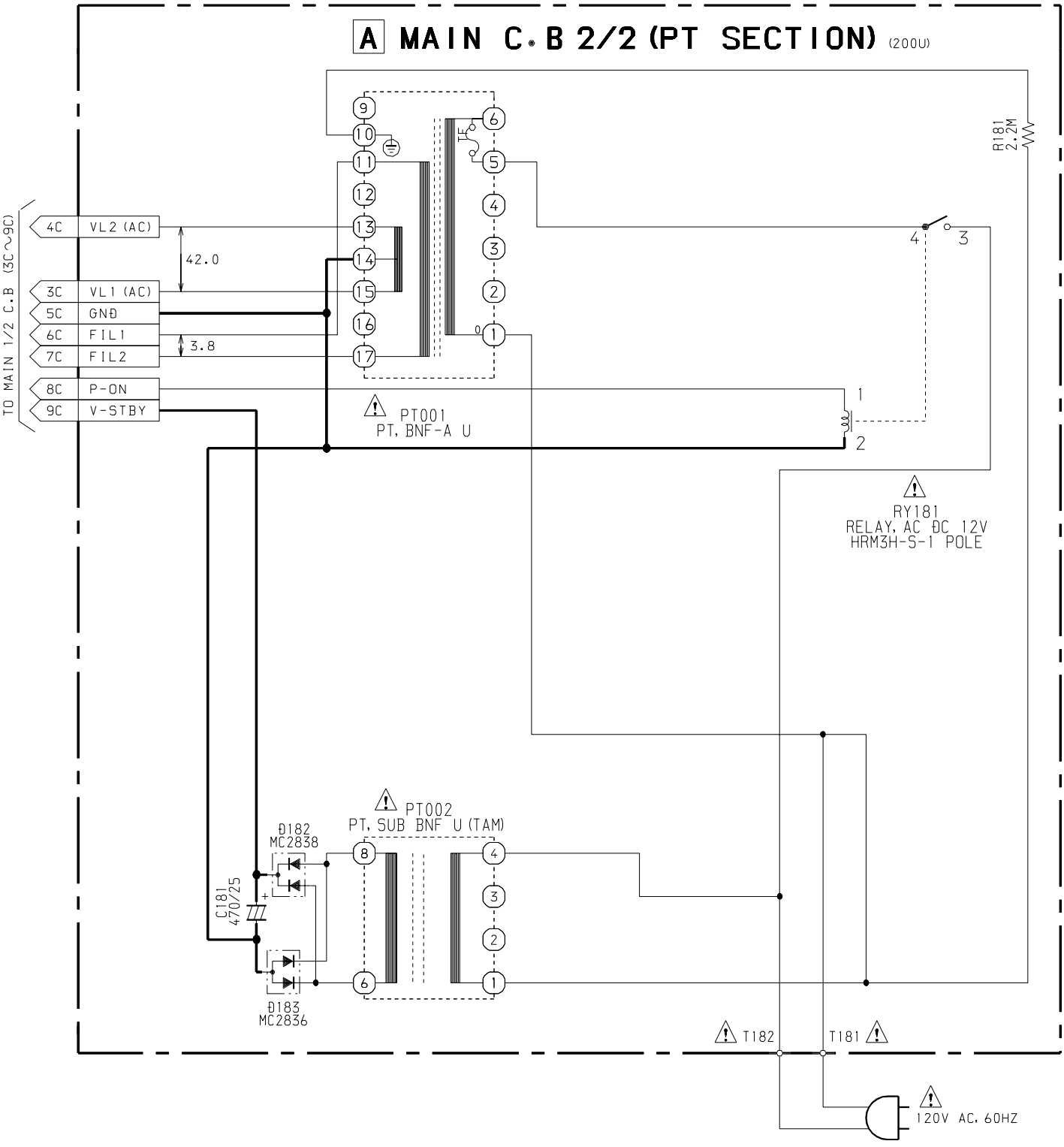
SCHEMATIC DIAGRAM – 6 (FRONT / DECK)<U,LH>



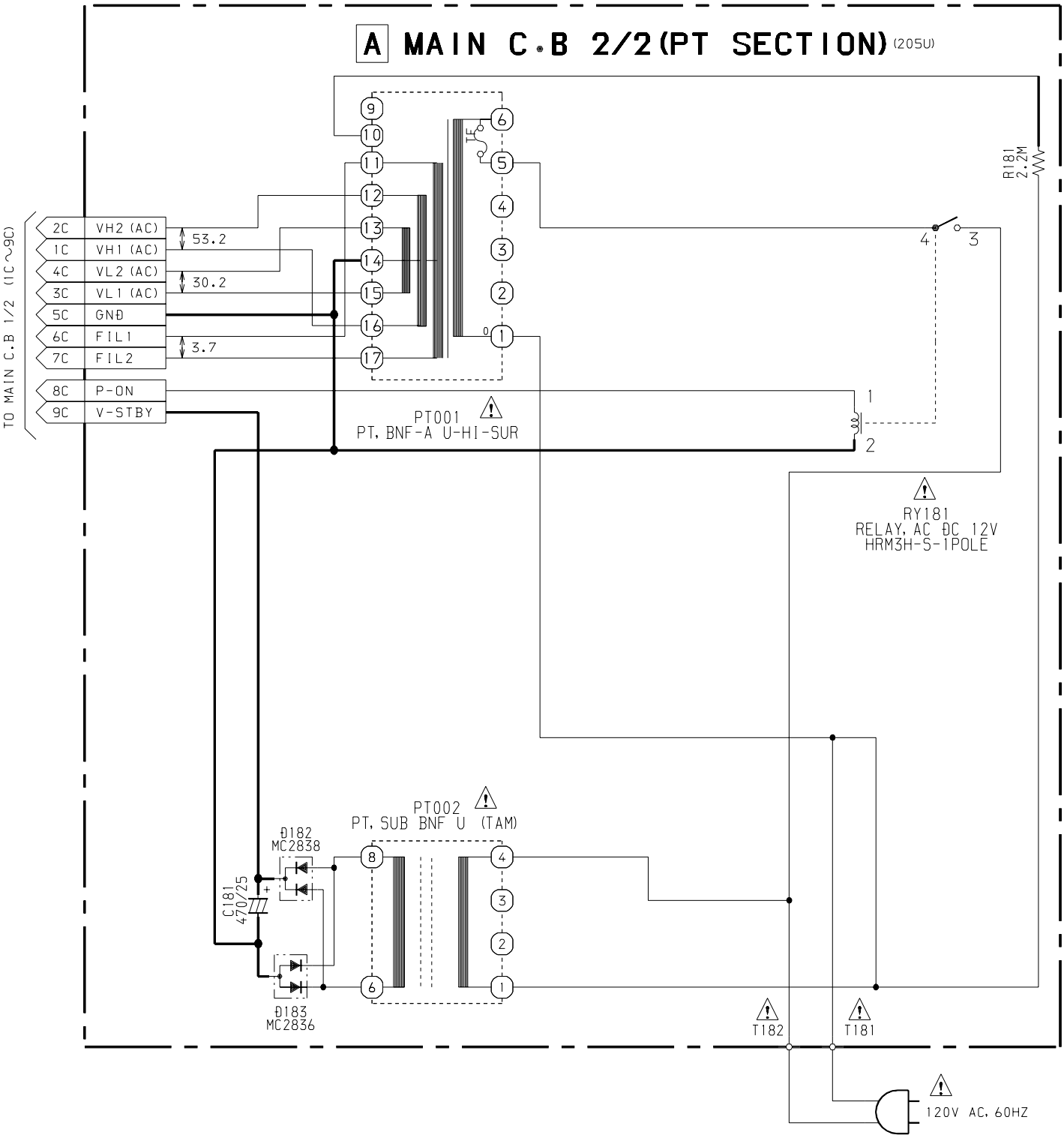
SCHEMATIC DIAGRAM – 7 (TUNER)<U,LH>



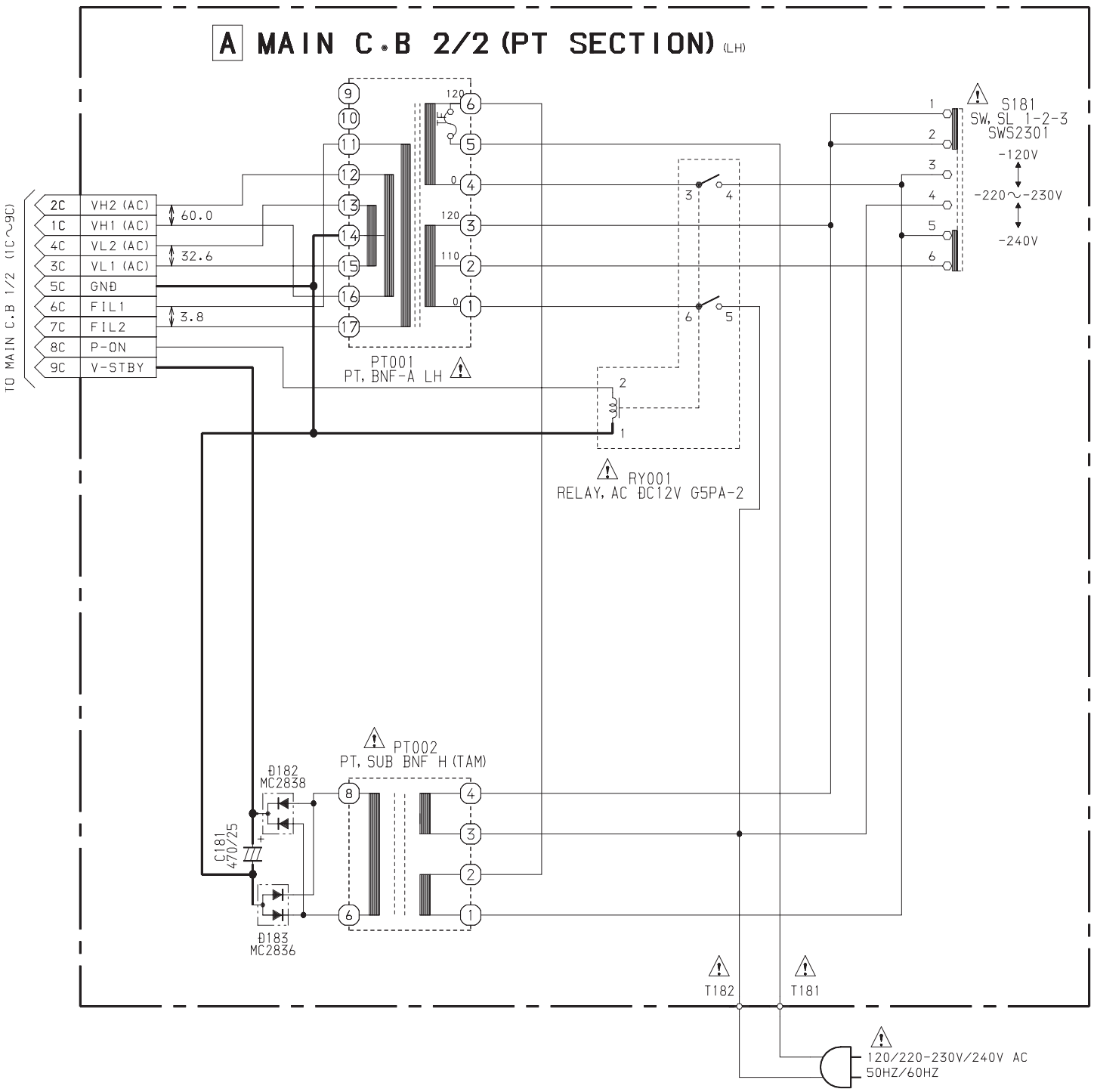
SCHEMATIC DIAGRAM – 8 (MAIN 2/2: PT SECTION)<200U>



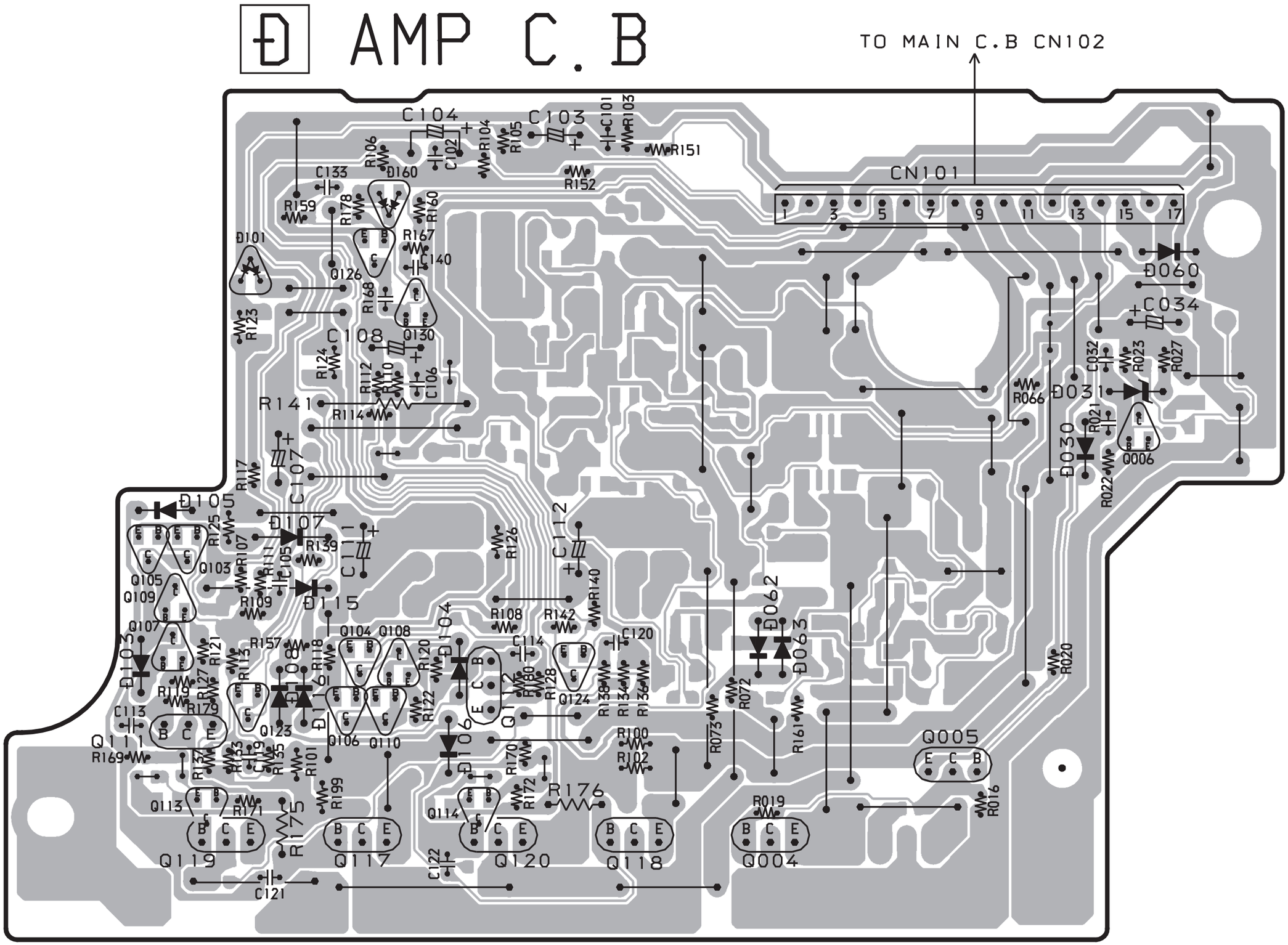
SCHEMATIC DIAGRAM – 9 (MAIN 2/2: PT SECTION)<205U>

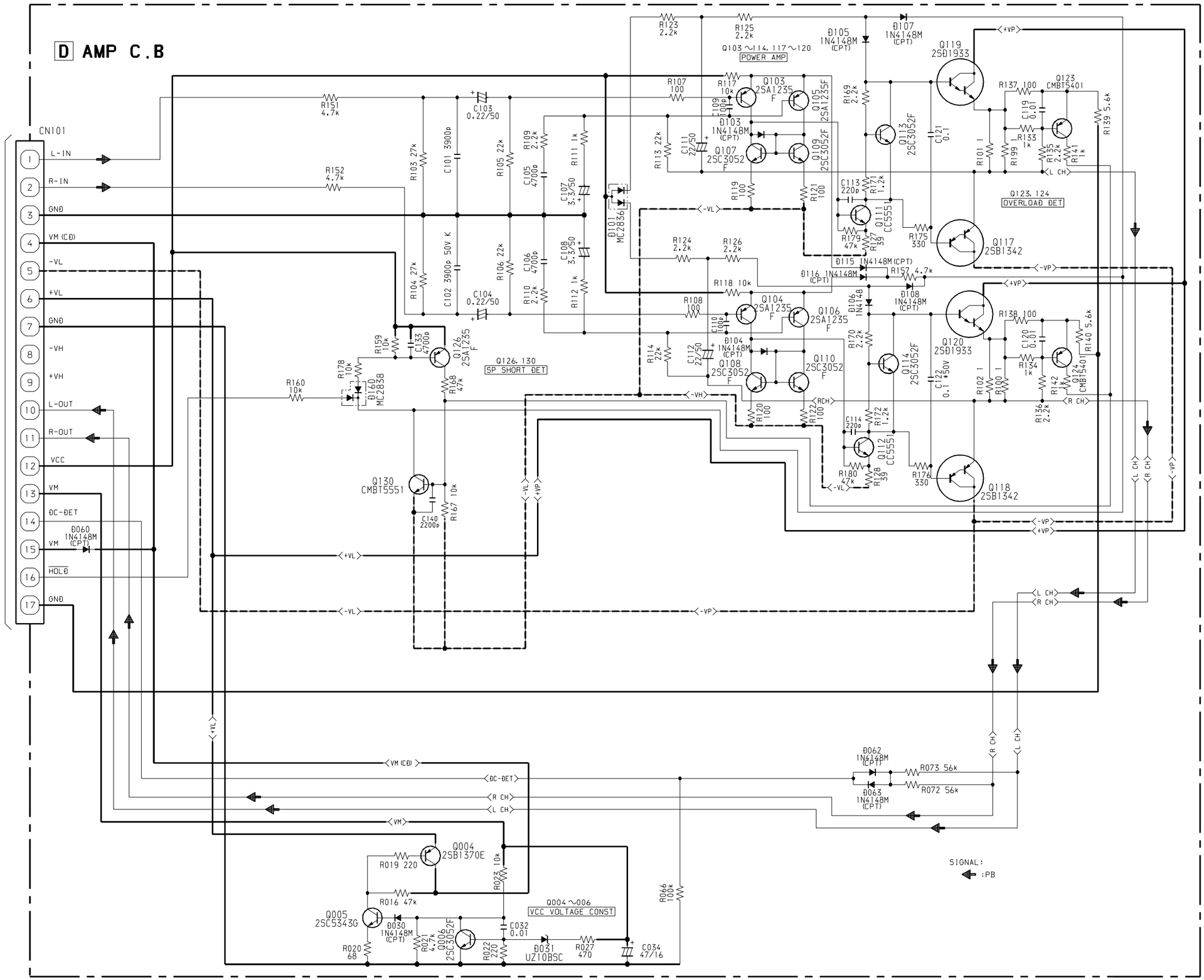


SCHEMATIC DIAGRAM - 10 (MAIN 2/2: PT SECTION)<200LH>

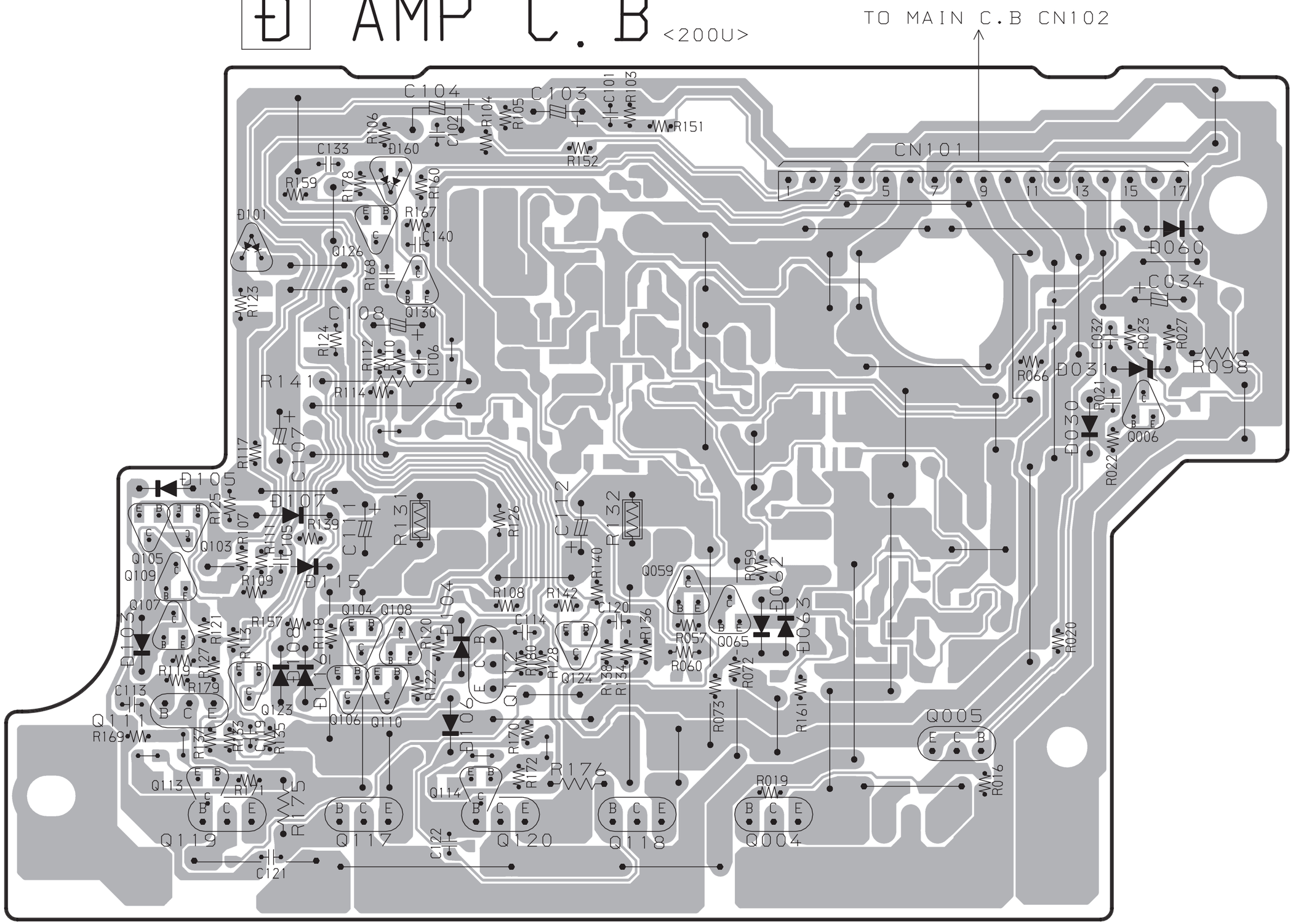


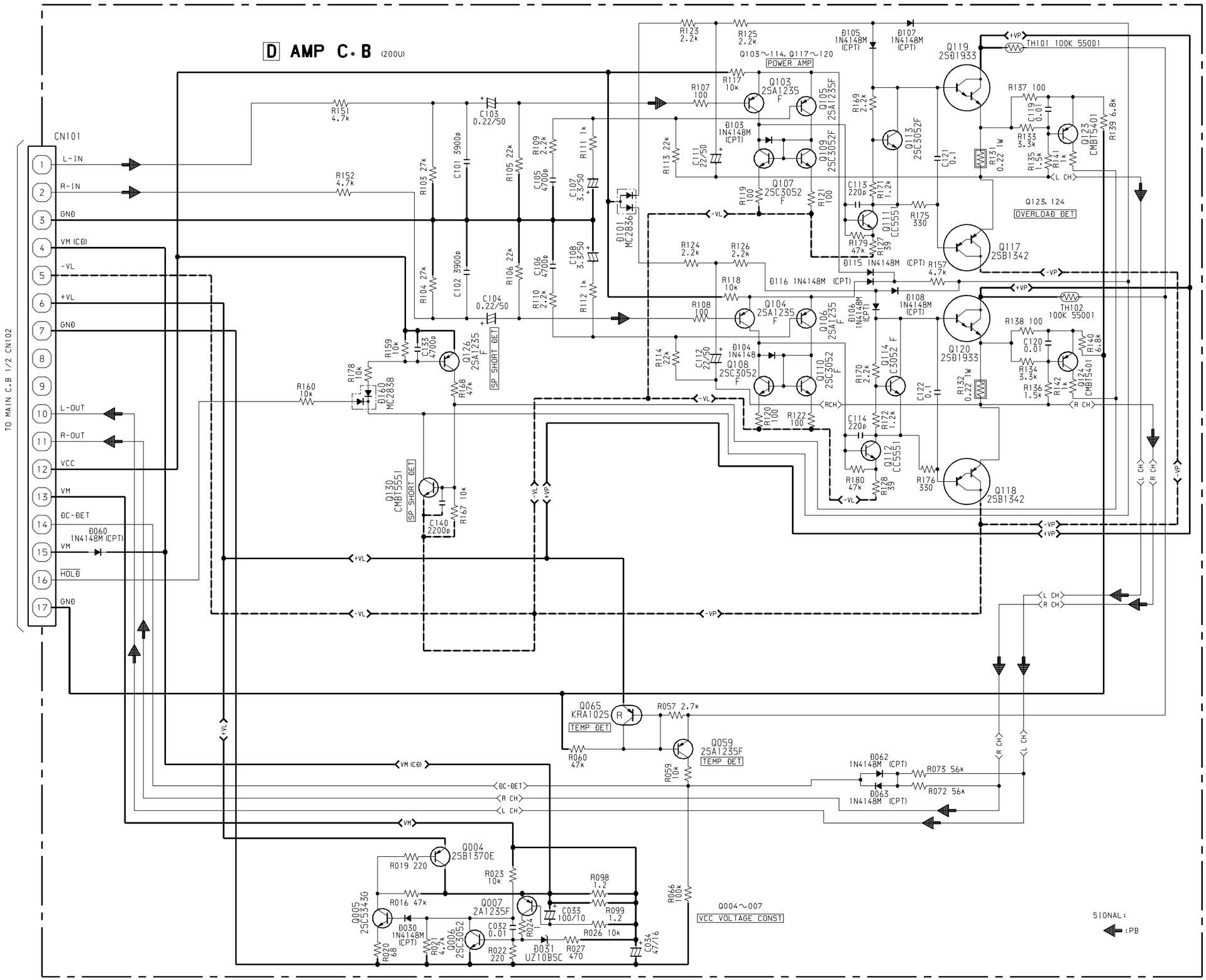
AMP C.B


TO MAIN C.B CN102
CN101
1 3 5 7 9 11 13 15 17
C104
C103
C101
R103
R151
R152
R104
R105
R106
C102
D160
C133
R159
R178
R160
R167
C140
D101
Q126
R168
R123
Q130
C108
R124
R112
R110
C106
R141
R114
C107
R117
D105
D107
R139
C111
R125
R107
R111
C105
Q103
Q105
Q109
R109
D115
Q107
D103
R121
R127
R119
R113
R157
R118
D108
D116
C113
Q123
Q111
R169
R137
R133
C119
R135
R101
R199
Q113
R171
R175
Q119
C121
Q106
Q110
Q104
Q108
R120
D104
R122
C114
R108
R142
R126
C112
R140
C120
Q112
R180
R128
Q124
R138
R134
R136
R100
R102
R170
R172
R176
Q114
Q117
Q120
Q118
C122
D062
D063
R072
R073
R161
R019
Q004
Q005
R016
R020
D060
C034
C032
R023
R027
R066
D031
R021
D030
Q006
R022

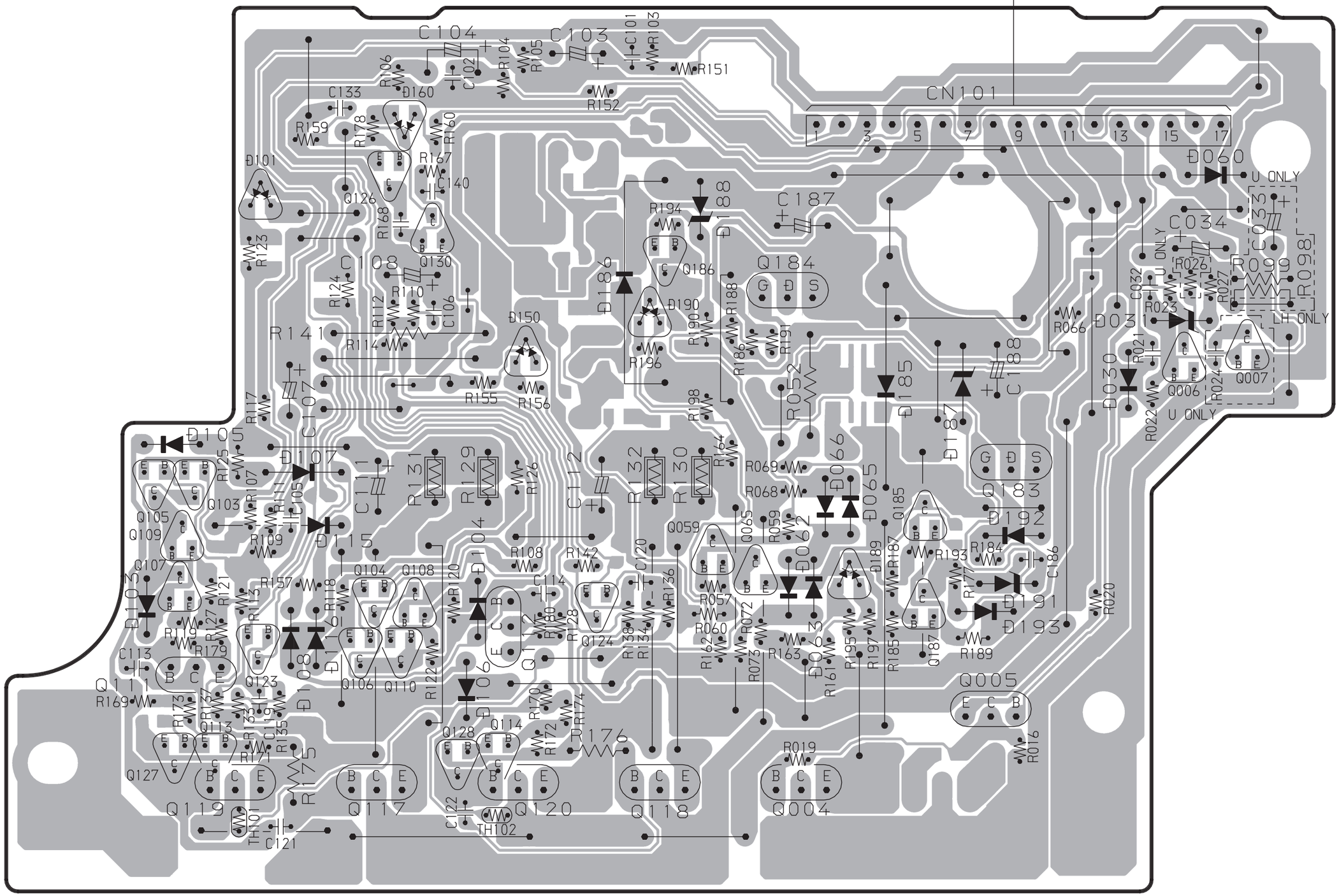

D AMP C.B
CN101
L-IN
R-IN
GND
VM (CD)
-VL
+VL
GND
-VH
+VH
L-OUT
R-OUT
VCC
VM
DC-DET
VM
HOLD
GND
TO MAIN C.B CN102
D060 1N4148M (CPT)
R151 4.7k
R152 4.7k
C103 0.22/50
C104 0.22/50
C101 3900p
C102 3900p 50V K
R103 27k
R104 27k
R105 22k
R106 22k
R109 2.2k
R110 2.2k
C105 4700p
C106 4700p
C107 3.3/50
C108 3.3/50
R111 1k
R112 1k
D101 MC2836
R123 2.2k
R125 2.2k
Q103~114, 117~120 POWER AMP
D105 1N4148M (CPT)
D107 1N4148M (CPT)
Q119 2SD1933
R107 100
R117 10k
Q103 2SA1235 F
Q105 2SA1235F
C109 100p
D103 1N4148M (CPT)
Q107 2SC3052 F
Q109 2SC3052F
R113 22k
C111 22/50
R119 100
R121 100
R169 2.2k
Q113 2SC3052F
C121 0.1
R137 100
Q123 CMBT5401
C119 0.01
R133 1k
R135 2.2k
R141 1k
R139 5.6k
R101 1
R199
L CH
Q123, 124 OVERLOAD DET
C113 220p
R171 1.2k
Q111 CC5551
R179 47k
R127 39
R175 330
Q117 2SB1342
R124 2.2k
R126 2.2k
D115 1N4148M(CPT)
D116 1N4148M (CPT)
R157 4.7k
D108 1N4148M (CPT)
R118 10k
R108 100
Q104 2SA1235 F
Q106 2SA1235 F
D106 1N4148
C110 100p
D104 1N4148M (CPT)
Q108 2SC3052 F
Q110 2SC3052 F
R114 22k
C112 22/50
R170 2.2k
Q114 2SC3052F
C122 0.1 *50V
Q120 2SD1933
R138 100
C120 0.01
R134 1k
R140 5.6k
Q124 CMBT5401
R142 1k
R102 1
R100 1
R136 2.2k
R CH
-VH
RCH
R120 100
R122 100
C114 220p
R172 1.2k
Q112 CC5551
R180 47k
R128 39
R176 330
Q118 2SB1342
Q126, 130 SP SHORT DET
R159 10k
C133 4700p
R178 10k
D160 MC2838
R160 10k
R168 47k
Q126 2SA1235 F
Q130 CMBT5551
C140 2200p
R167 10k
-VL
+VP
+VL
-VL
-VP
-VP
+VP
L CH
R CH
VM (CD)
DC-DET
R CH
L CH
VM
D062 1N4148M (CPT)
D063 1N4148M (CPT)
R073 56k
R072 56k
R CH
L CH
Q004 2SB1370E
R019 220
R023 10k
R016 47k
Q004~006 VCC VOLTAGE CONST
Q005 2SC5343G
D030 1N4148M (CPT)
R021 4.7k
Q006 2SC3052F
R022 220
C032 0.01
D031 UZ10BSC
R027 470
C034 47/16
R020 68
R066 100k
SIGNAL:
:PB

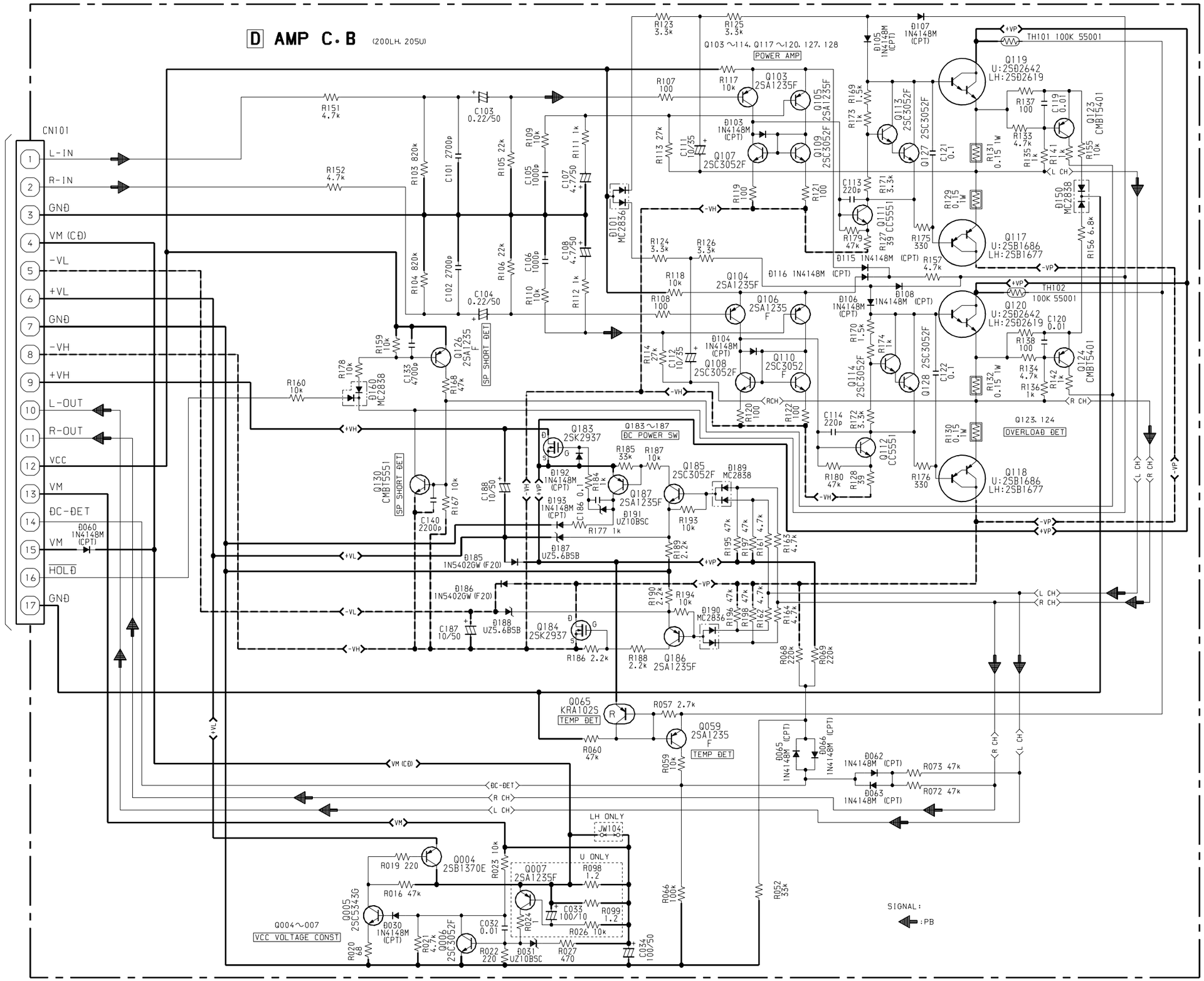
AMP C.B <200U>


TO MAIN C.B CN102
CN101
C104
C103
C101
R103
R151
R152
R106
R104
R105
C102
D160
C133
R159
R178
R160
R167
C140
D101
Q126
R168
R123
C108
Q130
R124
R112
R110
C106
R141
R114
C107
R117
D105
R125
R107
D107
R139
C111
R131
Q103
Q105
Q109
R109
D115
Q107
D103
R121
R127
R113
R157
C109
R118
Q104
Q108
R120
D104
R122
R119
R179
C113
Q111
R169
R137
R133
C119
R135
Q123
Q106
Q110
D106
R108
R142
C114
C120
R136
Q112
R180
R128
Q124
R138
R134
C112
R126
R140
R132
Q059
R059
D062
D063
R057
Q065
R060
R072
R073
R161
R020
D060
C034
C032
R023
R027
R098
D031
R066
R021
D030
Q006
R022
Q005
R016
R019
Q004
R176
R172
R170
Q114
Q120
C122
R175
Q113
R171
Q119
Q117
Q118
C121


D AMP C.B (200U)
CN101
1 L-IN
2 R-IN
3 GND
4 VM (CD)
5 -VL
6 +VL
7 GND
8
9
10 L-OUT
11 R-OUT
12 VCC
13 VM
14 DC-DET
15 VM
16 HOLD
17 GND
TO MAIN C.B 1/2 CN102
D060 1N4148M (CPT)
Q103~114, Q117~120 POWER AMP
Q103 2SA1235 F
Q105 2SA1235F
Q107 2SC3052 F
Q109 2SC3052F
Q111 CC5551
Q113 2SC3052F
Q117 2SB1342
Q119 2SD1933
Q104 2SA1235 F
Q106 2SA1235 F
Q108 2SC3052 F
Q110 2SC3052 F
Q112 CC5551
Q114 C3052 F
Q118 2SB1342
Q120 2SD1933
Q123, 124 OVERLOAD DET
Q126 2SA1235 F SP SHORT DET
Q130 CMBT5551 SP SHORT DET
TH101 100K 55001
TH102 100K 55001
Q123 CMBT5401
Q124 CMBT5401
D101 MC2836
D160 MC2838
D103 1N4148M (CPT)
D104 1N4148
D105 1N4148M (CPT)
D106 1N4148M (CPT)
D107 1N4148M (CPT)
D108 1N4148M (CPT)
D115 1N4148M (CPT)
D116 1N4148M (CPT)
D030 1N4148M (CPT)
D031 UZ10B5C
D062 1N4148M (CPT)
D063 1N4148M (CPT)
Q065 KRA102S TEMP DET
Q059 2SA1235F TEMP DET
Q004 2SB1370E
Q005 2SC5343G
Q007 2A1235F
Q006 2SC3052
Q004~007 VCC VOLTAGE CONST
SIGNAL: :PB
+VP
-VP
+VL
-VL
VM (CD)
DC-DET
R CH
L CH
RCH

Đ AMP C.B <205U, 200LH>

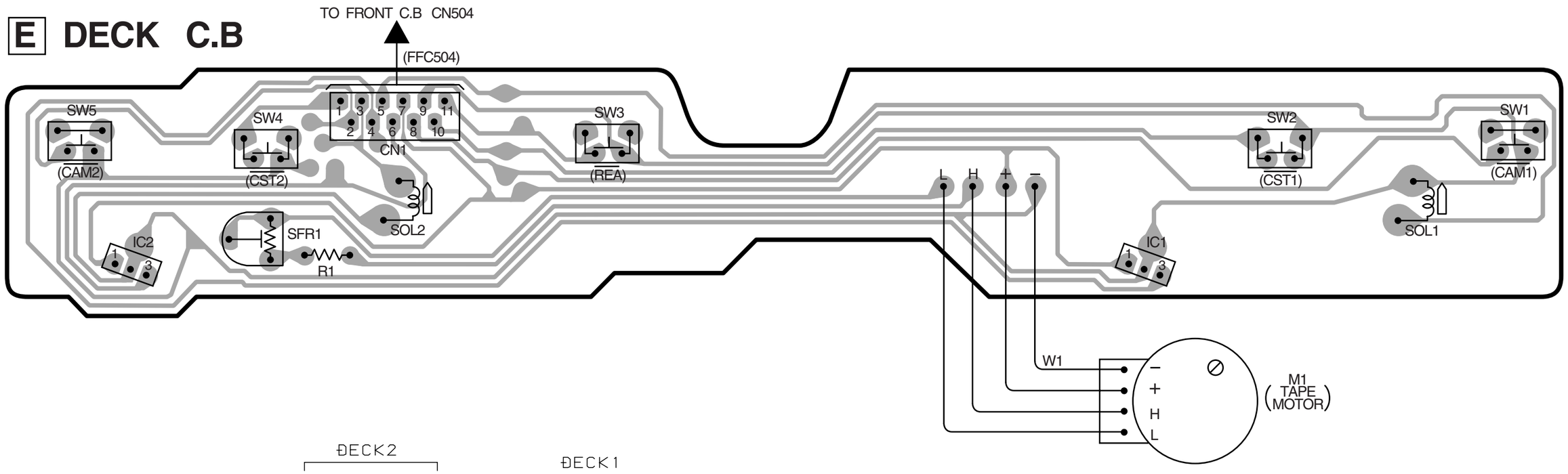


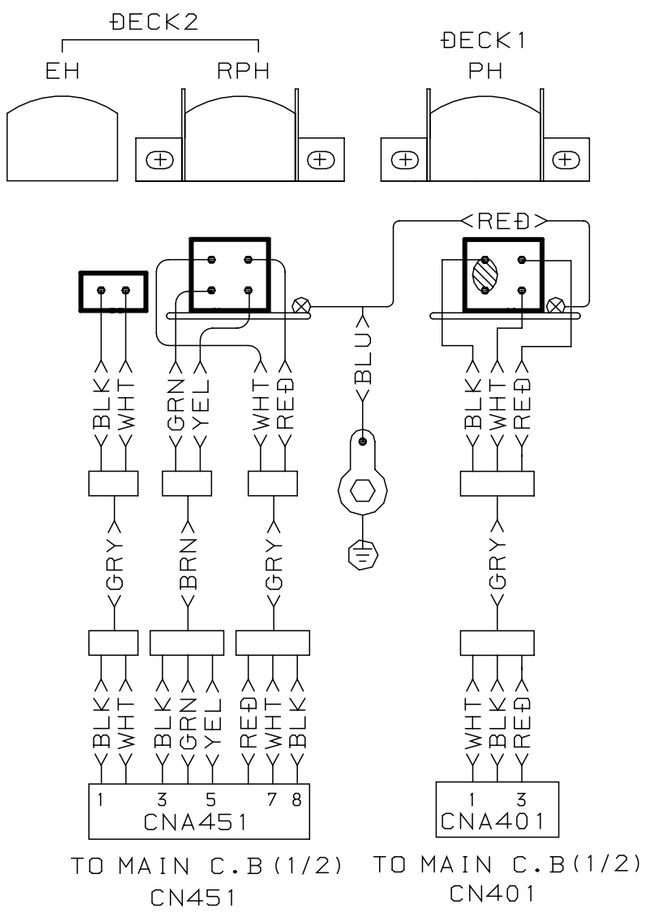

D AMP C.B (200LH. 205U)
TO MAIN C.B 1/2 CN102
CN101
L-IN
R-IN
GND
VM (CD)
-VL
+VL
GND
-VH
+VH
L-OUT
R-OUT
VCC
VM
DC-DET
VM
HOLD
GND
Q103~114, Q117~120, 127, 128
POWER AMP
TH101 100K 55001
TH102 100K 55001
Q119 U:2SD2642 LH:2SD2619
Q120 U:2SD2642 LH:2SD2619
Q117 U:2SB1686 LH:2SB1677
Q118 U:2SB1686 LH:2SB1677
Q123, 124
OVERLOAD DET
Q183~187
DC POWER SW
SP SHORT DET
TEMP DET
Q065 KRA102S
Q059 2SA1235 F
Q004~007
VCC VOLTAGE CONST
LH ONLY
JW104
U ONLY
SIGNAL:
:PB

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

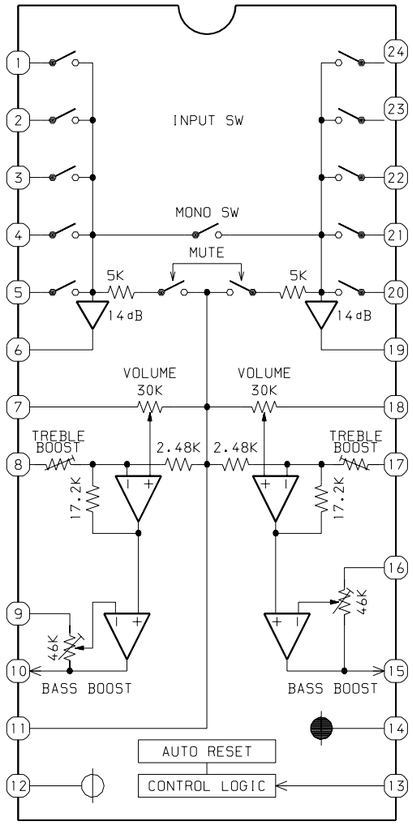
E DECK C.B



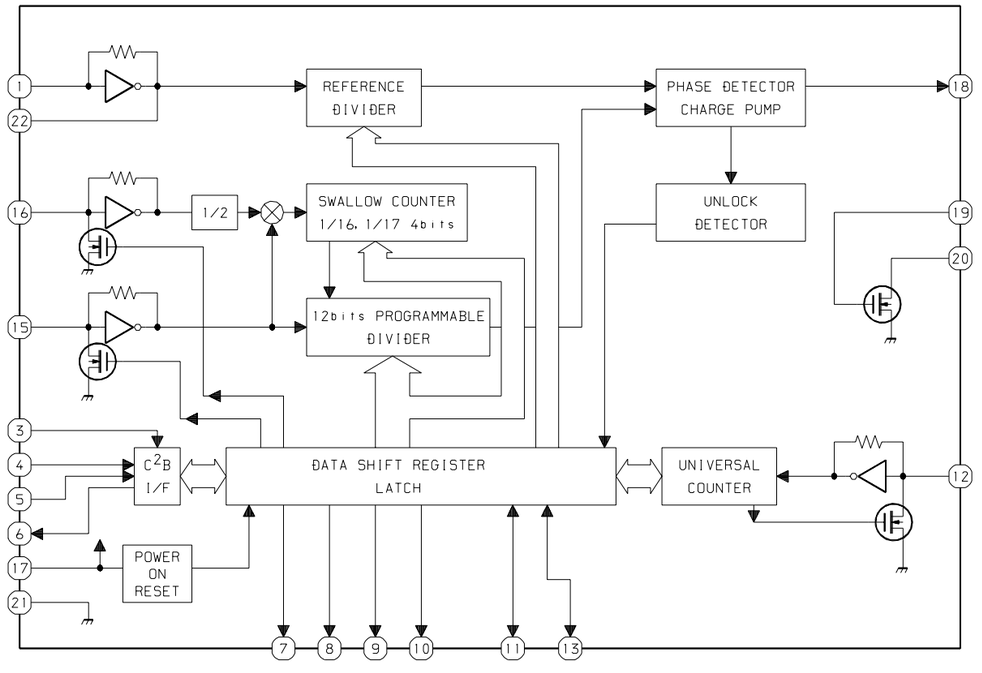


IC BLOCK DIAGRAM

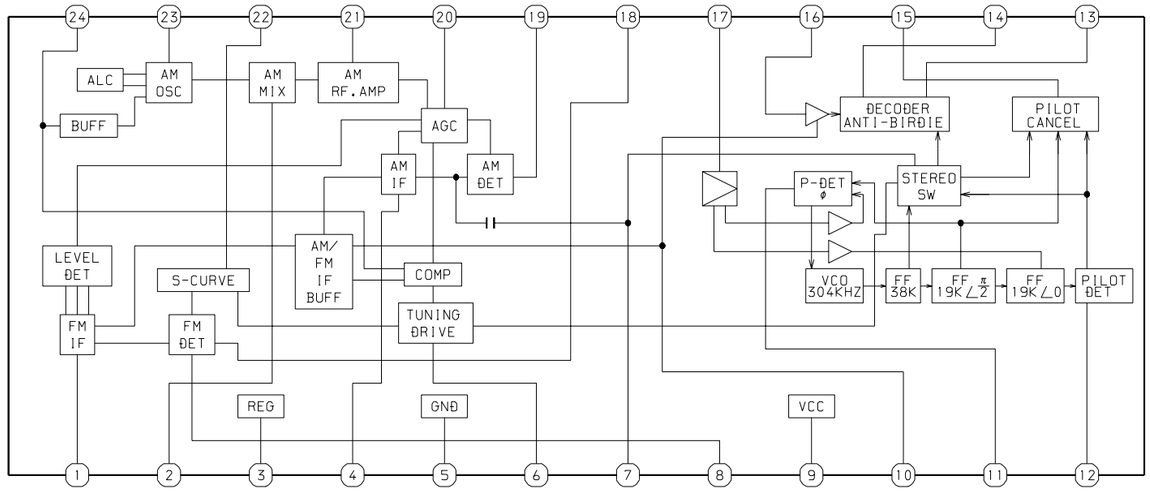
IC, M62495AFP



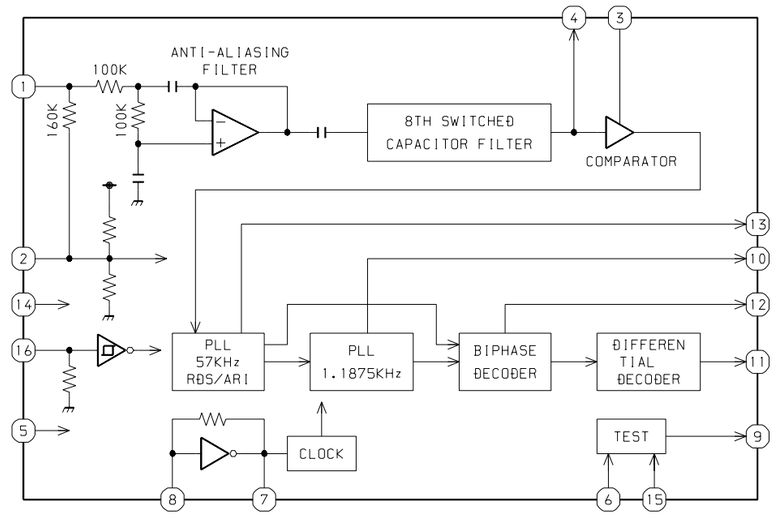
IC, LC72131Đ-N



IC, LA1845L

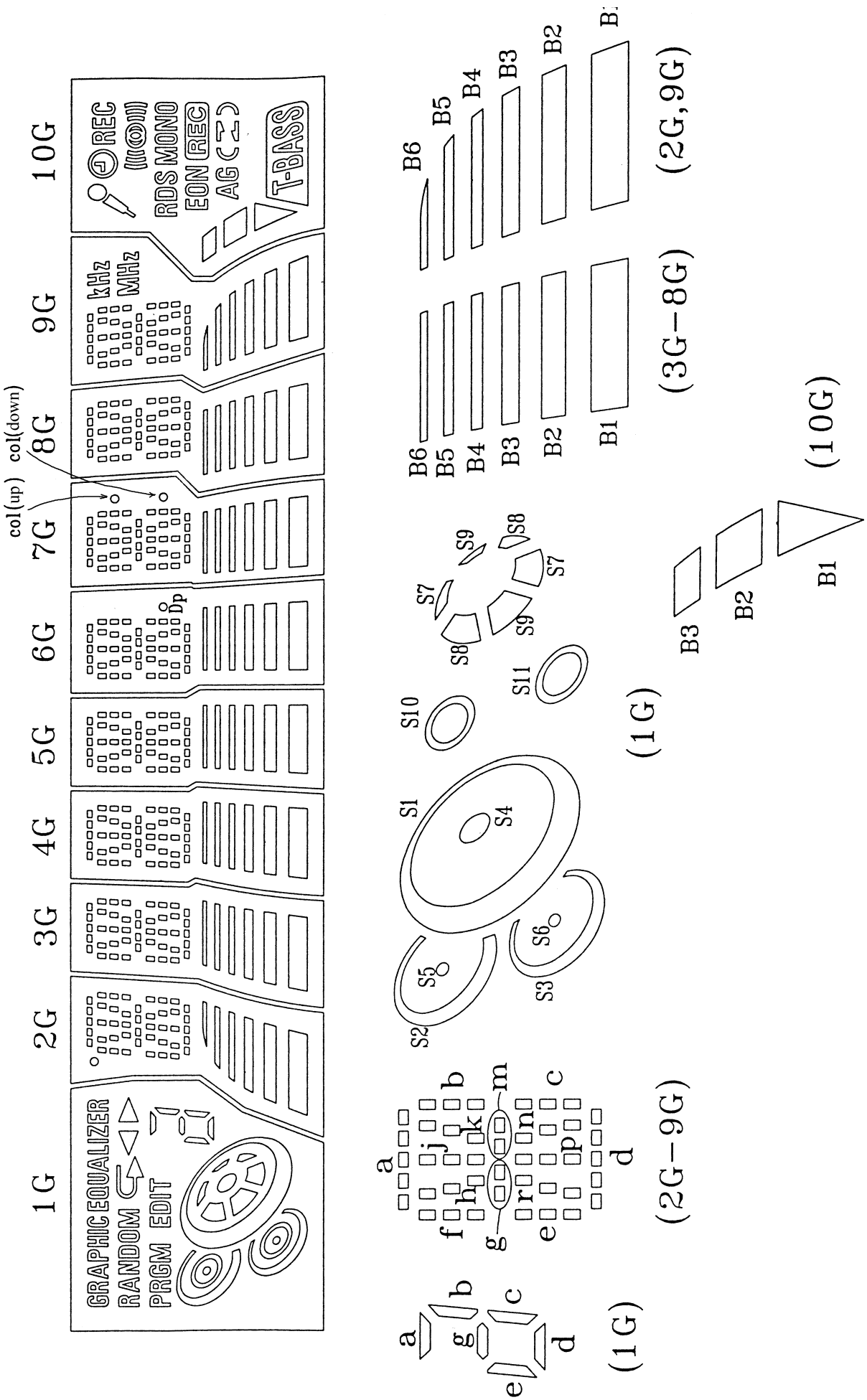


IC, BU1920FS



FL (HNA-10SS19T) GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	GRAPHIC EQUALIZER	d	d	d	d	d	d	d	d	
P2	RANDOM	n	n	n	n	n	n	n	n	
P3		p	p	p	p	p	p	p	p	REC
P4		r	r	r	r	r	r	r	r	
P5		e	e	e	e	e	e	e	e	RDS
P6	PRGM	c	c	c	c	c	c	c	c	MONO
P7	EDIT	g	g	g	g	g	g	g	g	EON
P8	a,g,d	m	m	m	m	m	m	m	m	REC
P9	b	f	f	f	f	f	f	f	f	AG
P10	c	b	b	b	b	b	b	b	b	
P11	e	k	k	k	k	k	k	k	k	
P12	S1	j	j	j	j	j	j	j	j	
P13	S2	h	h	h	h	h	h	h	h	B3
P14	S3	a	a	a	a	a	a	a	a	B2
P15	S4	○	B6	B6	B6	Dp	col(down)	B6	kHz	B1
P16	S5	B6	B5	B5	B5	B6	col(up)	B5	MHz	T-BASS
P17	S6	B5	B4	B4	B4	B5	B6	B4	B6	—
P18	S7	B4	B3	B3	B3	B4	B5	B3	B5	—
P19	S8	B3	B2	B2	B2	B3	B4	B2	B4	—
P20	S9	B2	B1	B1	B1	B2	B3	B1	B3	—
P21	S10	B1	—	—	—	B1	B2	—	B2	—
P22	S11	—	—	—	—	—	B1	—	B1	—

PIN NO.	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
CONNECTION	F2	F2	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	NX	NX	NX	NX	NX	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	1G	2G	3G	4G

10	9	8	7	6	5	4	3	2	1
5G	6G	7G	8G	9G	10G	NP	NP	F1	F1

IC DESCRIPTION

IC, UPD780226GF-022-3BA<EXCEPT 205EZ> / UPD780228GF-079-3BA<205EZ>

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SOL1}}$	O	DECK1 solenoid output.
2	$\overline{\text{SOL2}}$	O	DECK2 solenoid output.
3	$\overline{\text{O-MOTOR}}$	O	DECK MOTOR $\overline{\text{ON}}$/OFF output.
4	O-PB2	O	DECK2/$\overline{\text{DECK1}}$ play output.
5	$\overline{\text{O-BIAS}}$	O	BIAS ON output.
6	O-RMT	O	REC mute output.
7	O-CD. ON	O	CD ON output.
8	O-TU. ON	O	TUNER ON output.
9	NC	-	Not connected.
10	$\overline{\text{O-STBY. LED}}$	O	STANDBY LED ON/OFF output.
11	$\overline{\text{O-CLK SFT}}$	O	Micon clock shift output.
12 ~ 16	NC	-	Not connected.
17	IC	-	Internal connection (connected to GND).
18	VSS0	-	GND.
19	VDD0	-	Power supply.
20	I-VOL A	I	Volume rotary encoder input A.
21	I-VOL B	I	Volume rotary encoder input B.
22	O-POWER	O	System power supply $\overline{\text{ON}}$/OFF output.
23	O-DISH-R	O	CD turntable reverse rotation output.
24	CD. CE/O-CD DATA	O	CD enable output / CD data output.
25	I-$\overline{\text{TUNE}}$/IFC	I	Tuner SD detection input / Tuner IF count input.
26	I-RDS. DATA /O-STB. ECHO	I/O	Tuner RDS data input (UPD780228GF-079-3BA only). / Strobe output for shift register.
27	I-WRQ	I	CD WRQ input.
28	I-RDS. CLK	I	Tuner RDS clock input (UPD780228GF-079-3BA only).
29	I-SUB. Q	I	SUB Q data input.
30	RESET	-	System reset.
31	O-DSC DATA	O	Function IC control output.
32	I-STEREO	I	Tuner stereo input.
33	I-DRF	I	CD DRF input.
34	$\overline{\text{I-RMC}}$	I	System remote control input.
35	I-TM. BASE	I	Base input for clock.
36	I-DISH	I	CD turntable photo sensor A/D input.
37	VDD1	-	Power supply.
38	X2	-	4.19 MHz oscillator circuit.
39	X1	-	4.19 MHz oscillator circuit.
40	VSS1	-	GND.
41	AVDD	-	Power supply.
42	I-HOLD	I	Power failure detected input.
43	I-CD SW	I	CD mecha switch input.
44	I-SPEANA1	I	A/D 1 input for spectrum analyser level display.

Pin No.	Pin Name	I/O	Description
45	I-SPEANA2	I	A/D 2 input for spectrum analyser level display.
46	I-SPEANA3	I	A/D 3 input for spectrum analyser level display.
47	I-KEY1	I	Key 1 input.
48	I-KEY2	I	Key 2 input.
49	I-TU. SIG	I	Tuner tuning signal level input (UPD780228GF-079-3BA only).
50	AVSS	-	GND.
51	O-PLL CLK	O	PLL clock enable output.
52	O-PLL CE	O	Chip enable output for tuner PLL.
53	O-CD CLK	O	CD clock output.
54	O-CD DATA	O	CD data output.
55	O-CLOSE	O	CD tray close data output (Not used).
56	O-OPEN	O	CD tray open data output (Not used)s.
57	O-DISH F	O	CD turntable forward rotation output (Not used).
58	$\overline{\text{O-KSCAN}}$	O	Key scan output.
59	$\overline{\text{CST1}}$	I	DECK 1 cassette detect switch data input.
60	$\overline{\text{REA}}$	I	DECK 2 side-A recordable switch data input. “L” = REC.
61	$\overline{\text{CAM1}}$	I	DECK 1 CAM STOP switch data input.
62	$\overline{\text{AUTO2}}$	I	DECK 2 AUTO STOP switch data input.
63	$\overline{\text{AUTO1}}$	I	DECK 1 AUTO STOP switch data input.
64	$\overline{\text{CAM2}}$	I	DECK 2 CAM switch data input.
65	$\overline{\text{REB}}$	I	DECK 2 side-B recordable switch data input. “L” = REC.
66	$\overline{\text{CST2}}$	I	DECK 2 cassette detect switch data input.
67	P1/I-AM-10K	I/O	FL segment P1 output / AM10K data input (U,LH only).
68	P2/I-AM. ST	I/O	FL segment P2 output / AM ST data input (Not used).
69	P3/I-LW	I/O	FL segment P3 output / LW mode data input (EZ only).
70	P4/I-SW	I/O	FL segment P4 output / SW mode data input (Not used).
71	P5/I-OIRT	I/O	FL segment P5 output / OIRT data input (Not used).
72	P6/I-RDS	I/O	FL segment P6 output / RDS data input (UPD780228GF-079-3BA only).
73	P7/I-R+1	I/O	FL segment P7 output / REV data input (Not used).
74	P8/I-DEMO	I/O	FL segment P8 output / DEMO data input (Not used).
75	P9/I-C-JACK	I/O	FL segment P9 output / C-JACK data input (LH only).
76	P10/I-ECO-OFF	I/O	FL segment P10 output / ECO-OFF data input (LH only).
77	P11/I-FM WIDE	I/O	FL segment P11 output / FM WIDE data input (Not used).
78	P12	O	FL segment P12 output.
79	VDD2	-	Power supply.
80	VLOAD	-	Power supply for FL display.
81 ~ 90	P13 ~ P22	O	FL segment P13 ~ P22 output.
91 ~ 100	G1 ~ G10	O	FL grid G1 ~ G10 output.

ADJUSTMENT – 1 <TUNER / FRONT>

< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : U,LH: Set to AM 1710 kHz and check that the test point is 2160 kHz ± 45 Hz.
   EZ: Set to MW 1602 kHz and check that the test point is 2052 kHz ± 45 Hz.

2. AM VT Check<U,LH>
   Settings : • Test point : TP1 (VT)
   Method : Set to AM 1710 kHz and check that the test point is less than 8.0 V. Then set to AM 530 kHz and check that the test point is more than 0.6 V.

3. MW VT Check<EZ>
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602 kHz and check that the test point is less than 8.0 V. Then set to MW 531 kHz and check that the test point is more than 0.6 V.

4. LW VT Adjustment<EZ>
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144 kHz and adjust L942 so that the test point becomes 1.3 V ± 0.05 V. Then set to LW 290 kHz and check that the test point is less than 8.0 V.

5. AM Tracking Adjustment<U,LH>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : L951(1/3)
   Method : Set to AM 1000 kHz and adjust L951(1/3) so that the test point becomes maximum.

6. MW Tracking Adjustment<EZ>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : L951(1/3)
   Method : Set to MW 999 kHz and adjust L951(1/3) so that the test point becomes maximum.

7. LW Tracking Adjustment<EZ>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L941 ..... 144 kHz
   TC942 ..... 290 kHz
   Method : Set up TC942 to center before adjustment.
   The level at 144 kHz is adjusted to maximum by L941.
   Then the level at 290 kHz is adjusted to maximum by TC942.

8. AM IF Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L802 ..... 450 kHz

9. FM VT Check<U,LH>
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 87.5 MHz check that the test point is more than 0.5 V. Then set to FM 108.0 MHz and check that the test point is 7.0 V ± 0.1 V.

10. FM VT Check<EZ>
    Settings : • Test point : TP1 (VT)
    Method : Set to FM 87.5 MHz check that the test point is more than 0.5 V. Then set to FM 108.0 MHz and check that the test point is less than 8.0 V.

11. FM Tracking adjust<U,LH>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Adjustment location: L903
    Method : Set to FM 87.5 MHz and adjust L903 so that the test point is less than 9 dBµV.

12. FM Tracking check<EZ>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    Method : Set to FM 98.0 MHz and check that the test point is less than 13 dBµV.

13. DC Balance / Mono Distortion Adjustment
    Settings : • Test point : TP3, TP4 (DC)
    TP8 (LCH), TP9 (RCH)
    (MONO DISTORTION)
    • Adjustment location : L801
    • Input level : 60 dBµV
    Method : Set to FM 98.0 MHz and adjust L801 so that the voltage between TP3 and TP4 becomes 0 V ± 500 mV with minimum distortion.

14. Output Level Check
    <AM/MW>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 74 dBµV
    Method : Set to AM1000 kHz , MW 999 kHz and check that the test point is 50 mV ± 3 dB.

    <FM>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 60 dBµV
    Method : Set to FM 98.0MHz and check that the test point is 150 mV ± 3 dB.

15. FM Separation Check
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 60 dBµV
    Method : U,LH: Set to FM 98.0 MHz and check that the test point is more than 25 dB.
    EZ: Set to FM 83.0 MHz and check that the test point is more than 12 dB.

< FRONT SECTION >

16. µ-CON OSC Adjustment
    Settings : • Test point : TP5 (KEY-SCAN)
    TP6 (GND)
    • Adjustment location : L501
    Method : Insert AC plug while pressing of "POWER" key and "TUNER" function key.
    Connect a frequency counter across TP5 and TP6.
    Then adjust L501 so that the test point becomes 92.470 Hz ± 0.092 Hz.
    [Manual Reset]
    Make up for RESET after adjustment.
    * Reset is to press "POWER" key while pressing of "CLEAR (STOP)" key.

ADJUSTMENT – 2 <DECK>

< DECK SECTION >

1. Tape Speed Adjustment (DECK 2)
   Settings : • Test tape : TTA–100
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : SFR1
   Method : Play back the test tape and adjust SFR1 so that the test point becomes 3000 Hz ± 5 Hz (FWD) and FWD SPEED ± 45Hz (REV) with respect to forward speed.

2. Head Azimuth Adjustment (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back (FWD) the 8 kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

3. PB Frequency Response Check (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8 (Lch), TP9 (Rch)
   Method : Play back the 315 Hz and 10 kHzsignals of the test tape and check that the output ratio of the 10 kHz signal with respect to that of the 315 Hz signal is 0 dB ± 3 dB.

4. PB Sensitivity Check (DECK 1, DECK 2)
   Settings : • Test tape : TTA–200
   • Test point : TP8 (Lch), TP9 (Rch)
   Method : Play back the test tape and check that the output level of the test point is 110 mV ± 3 dB.

4. REC/PB Frequency Response Check (DECK 2)
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 8 kHz/1 kHz (-20 VU / 0dB)
   Method : Apply a 1 kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 10 mV. Record and play back the 1 kHz signals and check that the output is 0 dB ± 5 dB.

5. REC/PB Sensitivity Check (DECK 2)
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 8 kHz (0VU / 0 dB)
   Method : Apply a 1 kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 100 mV. Record and play back the 1 kHz signals and check that the output is –1 dB ± 3.5 dB.

CD TEST MODE

1. How to Start the CD Test Mode

While pressing the FUNCTION button, insert the AC plug to the power outlet.
When the test mode is started, the message [CD TEST] is displayed.

2. How to Exit the CD Test Mode

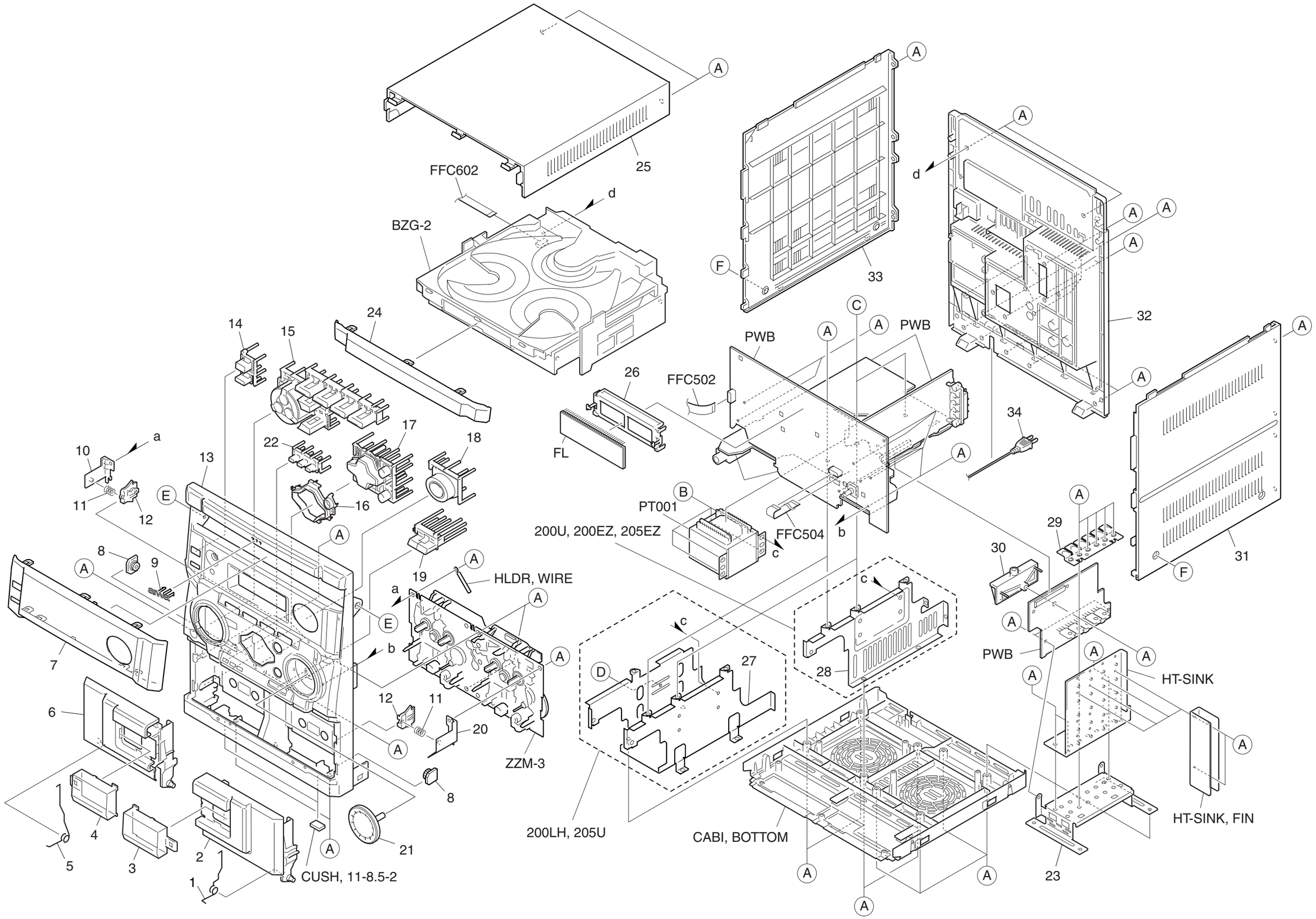
Press the POWER button or disconnect the AC plug.
* When any key other than PLAY is pressed during play mode, the machine exits the test mode.

3. Function Descriptions and Application of the CD Test Mode

No	Mode	Operation	Display	Function	Checking item
1	Start mode		All indicators light	• All FL indicators light	• FL check • Microprocessor check
2	Search mode	STOP button	READING	• LD illuminates all the time • Focus search continuous operations *1 • Spindle motor continuous kick	• APC circuit check • Laser current measurement • Focus search waveform check • Focus error waveform check (DRF in the search mode is ignored)
3	Play mode	Play button	Normal	• Normal playback • If TOC cannot be read, focus search is continued	• Each servo circuit is checked • DRF check
4	Traverse mode	PAUSE button	Normal	• Tracking servo OFF/ON • Each time PAUSE button is pressed, the tracking servo repeats turning OFF/ON	• Tracking balance check
5	Sled mode	FF button	CD TEST	• Pickup moves to the inner circumference *2 At the same time, lens kicks to the inner circumference	• Sled circuit check • Tracking circuit check • Mechanism operation check • Pickup check
		RWD button	CD TEST	• Pickup moves to the outer circumference *2 At the same time, lens kicks to the outer circumference	
6	Spindle mode	REC/REC MUTE button	All indicators light	• The spindle motor rotates forward (rough speed) by pressing the button and rotates backward by pressing one more time and stops by pressing again	• Spindle circuit • Spindle motor

*1: The driver IC heats up and the protection circuit starts working when the focus search is continued for 10 minutes or longer. There can be a case that operations can not be performed correctly.
In such a case, turn off the main power. After cooling down the machine, restart the machine.

*2: Be careful not to damage the gear because the sled motor rotates while the FF or RWD button is being pressed even if the pick-up is located in the innermost track or the outermost track.


A
25
FFC602
d
BZG-2
F
33
d
A
A
A
A
32
14
15
24
C
A
PWB
A
PWB
26
FFC502
FL
34
A
A
10
a
22
17
18
13
E
11
12
16
A
B
PT001
200U, 200EZ, 205EZ
FFC504
b
c
29
30
31
F
8
9
A
19
A
HLDR, WIRE
a
A
E
b
A
c
c
D
27
28
PWB
A
A
A
HT-SINK
A
7
6
12
11
20
ZZM-3
8
HT-SINK, FIN
4
5
3
2
1
CUSH, 11-8.5-2
A
21
200LH, 205U
CABI, BOTTOM
A
A
A
23

MECHANICAL PARTS LIST 1 / 1

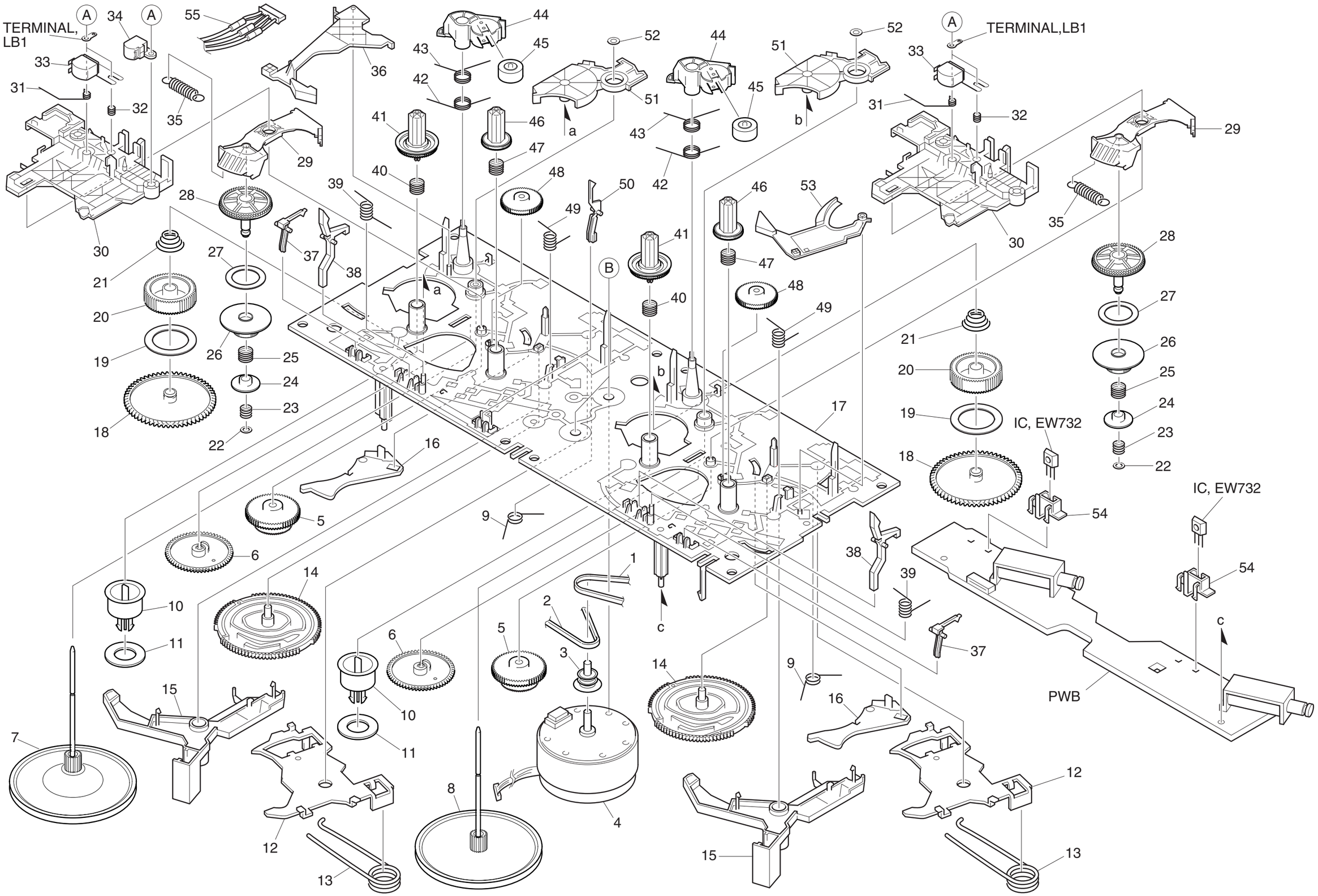
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF8-282-010		SPR-T,EJECT 2
2	8B-NFA-003-010		BOX,CASS 2
3	8B-NFA-010-010		WINDOW,CASS 2
4	8B-NFA-009-010		WINDOW,CASS 1
5	8A-NF8-281-010		SPR-T,EJECT 1
6	8B-NFA-002-010		BOX,CASS 1
7	8B-NFA-024-010		WINDOW,DISP H<200LH,200EZ>
7	8B-NFA-032-010		WINDOW,DISP HI205 U<205U>
7	8B-NFA-023-010		WINDOW,DISP REZ<205EZ>
7	8B-NFA-008-010		WINDOW,DISP U<200U>
8	8Z-NF6-210-010		DMPR,150 N
9	87-B00-002-010		BADGE,AIWA 30 ABS SIL
10	87-NF4-216-010		HLDR,LOCK 1
11	86-NF9-224-010		SPR-C,LOCK
12	82-NF5-229-010		PLATE,LOCK
13	8B-NFA-026-010		CABI,FR REZ<205EZ>
13	8B-NFA-001-010		CABI,FR U<EXCEPT 205EZ>
14	8B-NFA-015-010		KEY,POWER
15	8B-NFA-017-010		KEY,FUN
16	8B-NFA-011-010		RING,OPE
17	8B-NFA-018-010		KEY,OPE
18	8B-NFA-016-010		KEY,GEQ
19	8B-NFA-020-010		KEY,REC
20	87-NF4-217-110		HLDR,LOCK 2
21	8A-NFA-011-110		KNOB,RTRY VOL
22	8B-NFA-019-010		KEY,RDS<205EZ>
23	8B-NFA-222-010		HLDR,HT-SINK
24	8B-NFA-007-010		PANEL,TRAY
25	8B-NFA-004-010		PANEL,TOP
26	82-NF7-210-110		GUIDE,FL (*)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
27	8B-NFA-206-010		HLDR,PT T1 66-55/50<200LH,205U>
28	8B-NFA-204-010		HLDR,PT S 57-35 /66-30/25<EZ>
28	8B-NFA-202-010		HLDR,PT S 57-40<200U>
29	8B-NFA-218-010		HLDR,TR SUS
30	8B-NFA-203-010		HLDR,AMP
31	8B-NFA-006-010		PANEL,RIGHT
32	8B-NFA-054-010		CABI,REAR EZSC<200EZ>
32	8B-NFA-061-010		CABI,REAR HI205 USC<205U>
32	8B-NFA-052-010		CABI,REAR LHSC<200LH>
32	8B-NFA-058-010		CABI,REAR REZSC<205EZ>
32	8B-NFA-051-010		CABI,REAR USC<200U>
33	8B-NFA-005-010		PANEL,LEFT
⚠ 34	87-A80-157-010		AC CORD ASSY,E BLK CC<200EZ,205EZ>
⚠ 34	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI<200LH>
⚠ 34	87-A80-110-010		AC CORD ASSY,U SPT-2W<200U,205U>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-975-010		S-SCREW,IT+4-8
C	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
D	87-067-584-010		SCREW, BVT2+3-6<EXCEPT EZ,200U>
E	87-721-096-410		QT2+3-10 GLD
F	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray

TAPE MECHANISM EXPLODED VIEW 1 / 1



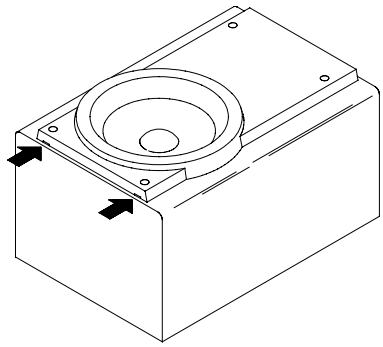
TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3
2	8Z-ZM3-235-010		BELT,MAIN L
3	8Z-ZM1-235-010		PULLEY,MOT
4	87-045-347-010		MOT,SHU2L 70
5	8Z-ZM1-232-010		GEAR,IDL FF/REW
6	8Z-ZM3-244-010		GEAR,CAM TD20
7	8Z-ZM3-256-010		FLY-WHL ASSY,M3 R
8	8Z-ZM3-255-010		FLY-WHL ASSY,M3 L
9	8Z-ZM3-231-010		SPR-T,TRIG
10	8Z-ZM3-213-010		CLR,MG
11	82-ZM3-616-010		RING MAGNET 4
12	8Z-ZM3-243-010		LEVER ASSY,HD UP
13	8Z-ZM3-238-010		SPR-T,HD UP
14	8Z-ZM3-219-010		GEAR,CAM M3
15	8Z-ZM3-206-010		LEVER,TRIG
16	8Z-ZM3-209-010		LEVER,CAM FR
17	8Z-ZM3-203-010		CHAS ASSY,M3
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B
19	8Z-ZM1-265-010		FELT,T-UP
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP
22	8Z-ZM1-275-010		W-L,1,47-4-0.25
23	8Z-ZM1-257-010		SPR-C,F/R
24	8Z-ZM1-236-010		CLR,SLIP FF/REW
25	8Z-ZM3-226-010		SPR-C,FR M3
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3
27	8Z-ZM1-269-010		FELT,FF/REW 2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
29	8Z-ZM3-220-010		LEVER,FR M3
30	8Z-ZM3-205-010		LEVER,PLAY M3
31	8Z-ZM3-233-010		SPR-T,BRG M3
32	84-ZM2-227-310		SPR-C,AZIMUTH
33	87-A90-403-110		HEAD,RPH MS15R
34	87-A90-404-010		HEAD,EH LE15B
35	8Z-ZM3-239-010		SPR-E,FR
36	8Z-ZM3-211-010		LEVER,EJECT R
37	8Z-ZM3-225-010		LEVER,STOP
38	8Z-ZM3-221-010		LEVER,CAS
39	8Z-ZM3-234-010		SPR-T,LVR CAS
40	8Z-ZM3-223-010		SPR-C,REEL R M3
41	8Z-ZM1-225-110		GEAR,REEL R
42	8Z-ZM3-240-010		SPR-T,T-UP M3
43	8Z-ZM3-237-010		SPR-T,PINCH M3
44	8Z-ZM3-215-010		LEVER,PINCH M3
45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
46	8Z-ZM1-226-010		GEAR,REEL L
47	8Z-ZM3-222-010		SPR-C,REEL L M3
48	8Z-ZM3-251-010		GEAR,IDL REW M3
49	8Z-ZM3-236-010		SPR-T,PLAY M3
50	82-ZM1-240-110		LVR,REC(*)
51	8Z-ZM3-216-010		LEVER,T-UP M3
52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
53	8Z-ZM3-212-010		LEVER,EJECT L
54	8Z-ZM3-214-010		HLDR,IC
55	8B-NFA-626-010		CONN ASSY,8P -RPB
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM2-220-110		V+2.6 ZZM-2

GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

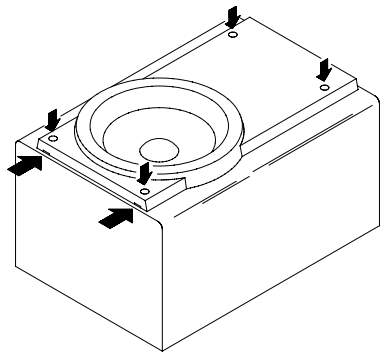
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



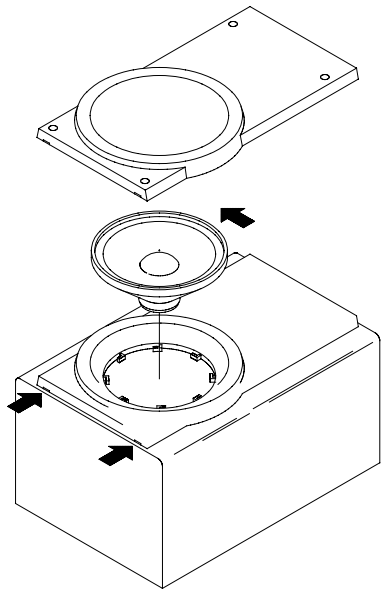
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

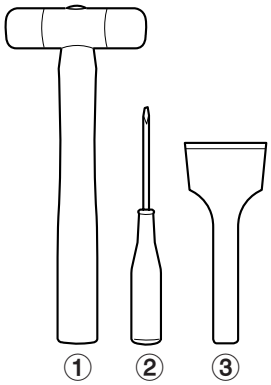


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

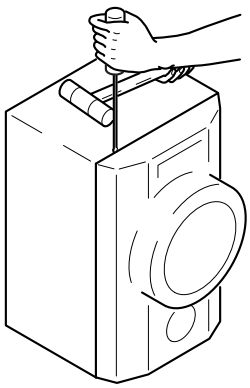


Fig-1

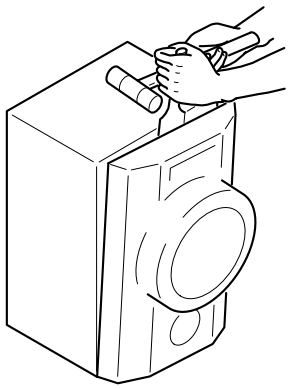


Fig-2

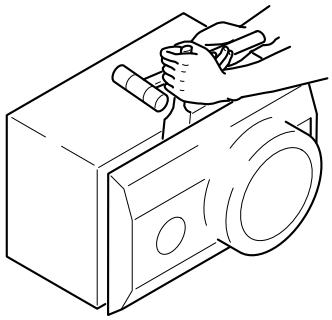


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST
(SX-NAJ202<YUSN> / NSZ202<YSC> / NSZ205<YSC, YLSC> / NAJ205<YUSN>)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NSL-001-010		PANER,FR
2	8B-NSL-006-010		GRILLE,FRAME ASSY<NSZ205YLSC,SNAJ205YUSN>
2	8B-NSL-020-010		GRILLE,FRAME ASSY 2WAY<NSZ202YSC,SNAJ202YUSN,NSZ205YSC>
3	8A-NSL-603-010		SPKR, CERAMIC
4	8B-NSL-019-010		SPKR, CERAMIC ASSY
5	8B-NSL-602-010		SPKR, W 120/25<NSZ205YLSC,SNAJ205YUSN>
5	8B-NSL-608-010		SPKR, W 120/16<NSZ205YSC,SNAJ202YUSN,NSZ202YSC>
6	8B-NSL-604-010		SPKR, TW 50<NSZ205YLSC,SNAJ205YUSN>

SPEAKER PARTS LIST (SX-R145<YUSN>)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	81-VSA-010-010		SPKR, CORD
2	87-010-384-010		CAP,E 100-25 M SME
3	8A-YS4-610-010		CORD,SPKR 3.5
4	8A-YS4-601-010		SPKR,80
5	8A-YS4-006-010		GRILLE, FRAME ASSY

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NFA-902-010		IB,LH(ESP)S<200LH>
1	8B-NFA-903-010		IB,U(ESF)S<U>
1	8B-NFA-906-010		IB,EZ(9L)S-RDS(205)<205EZ>
1	8B-NFA-916-010		IB,EZ(9L)S<200EZ>
2	87-043-115-010		FEEDER-ANT,FM<U,LH>
3	87-A90-118-010		ANT,WIRE FM(Z)<EZ>
4	87-A92-150-010		ANT,LOOP AM NO-CONT
⚠ 5	87-A91-017-010		PLUG,CONVERSION JT-0476<LH>
6	8B-NFC-702-010		RC UNIT,RC-AAS11(VS)

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